

Course analysis (2015/16 period 1)

DD2380 Artificial Intelligence, 6hp

Course responsible: Patric Jensfelt

Lecturers: Patric Jensfelt and Johannes Stork

Course assistants: Johannes Stork, Akshaya Thippur, Kaiyu Hang, Joshua Haustein, Judith Bütepage, Didrik Lundberg, Fabian Schilling, Benjamin Coors

Number of lectures: 13 lectures (26 hours)

Registered students: 282 according to VIS

"Prestationsgrad"

- **overall:** 85% (80% last year)
- **women:** 77% (69% last year)

"Examinationgrad"

- **overall:** 80% (77% last year)
- **women:** 76% (63% last year)

Course material:

- Book: Artificial Intelligence: A Modern Approach (by Stuart J. Russell and Peter Norvig, Prentice Hall)
- Lecture notes: Available for download from course webpage

Examination requirements:

- **LAB1** 3hp
 - 2 homework assignments
 - 1 essay on ethics
 - Quizzes on most lecture topics
- **PRO1** 3hp
 - Project completed in groups of 4 students
 - Identify and address an NLP problem
 - Write a report
 - Present the work orally

Summary of impressions:

The course was well received and that students found it interesting. The average grade on a 1-10 scale was 7,74 regarding how interesting it was. We switched to a scale 1-10 this year so it is not directly comparable but 90% gave it 6 or over on the 10 grade scale so this has to be considered very positive.

There were too many deadlines!

Relation to the previous years:

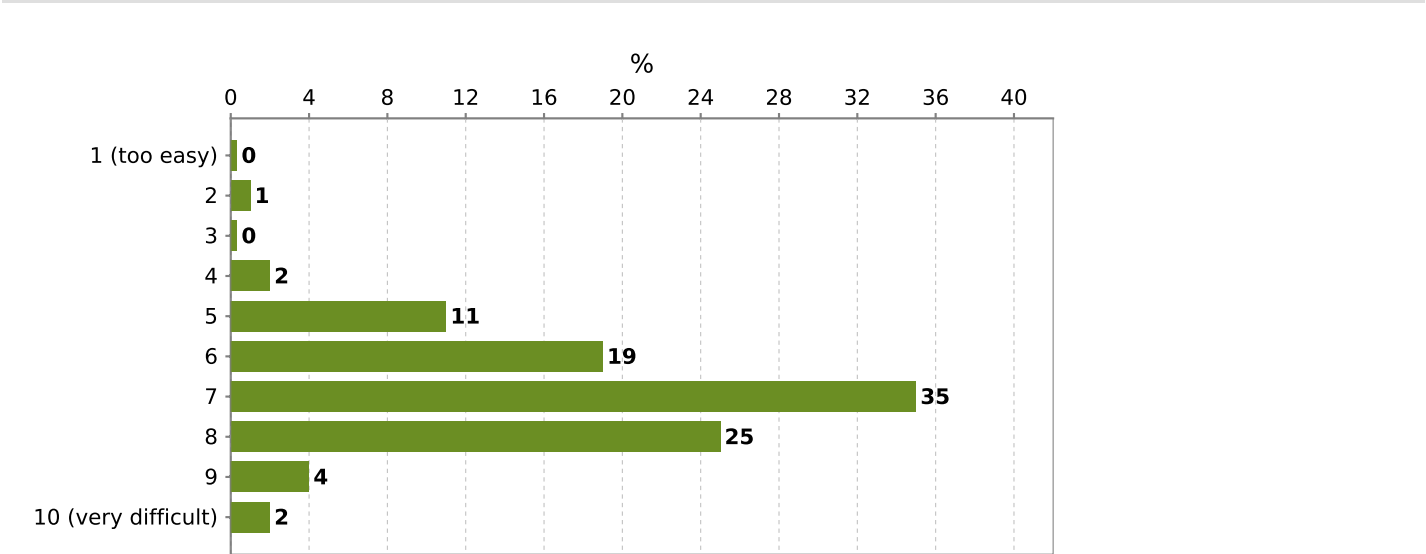
The biggest differences from last year were:

- Criteria based grading
 - The by far biggest difference from previous years is that we based the grading on criteria, one per ILO. This resulted in a more complex but

Survey results

Survey	Course evaluation
Event	DD2380 Artificial Intelligence ai15
Status	open
Date	2016-08-23 22:58
Group	Participants
Answered by	178(301) (59%)

How difficult did you perceive the course to be?

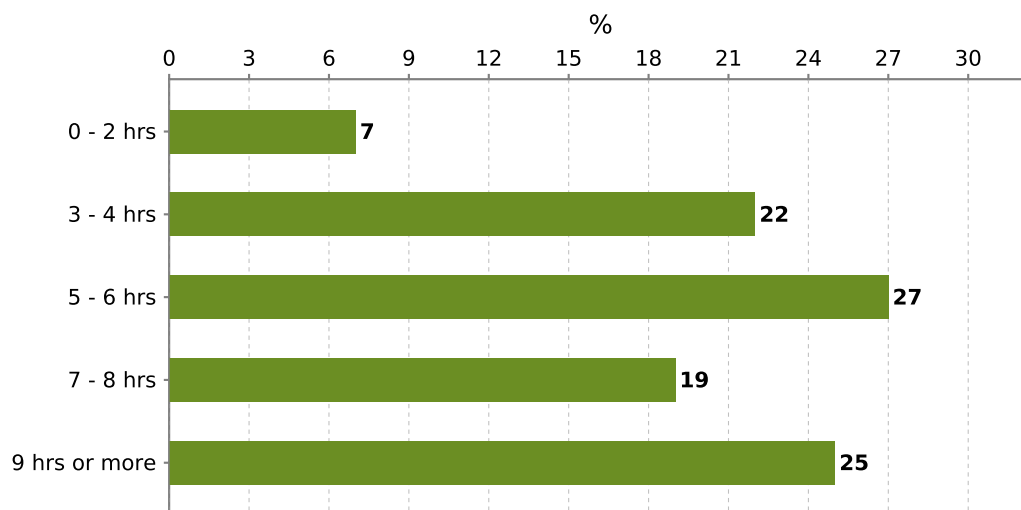


Number	Distribution	Answer choice
0	0%	1 (too easy)
1	0,6%	2
0	0%	3
4	2,2%	4
20	11,2%	5
34	19,1%	6
63	35,4%	7
45	25,3%	8
7	3,9%	9
4	2,2%	10 (very difficult)

Average (for numeric answers): 6,89

178 have answered of 301 (59%)
Maximum number of choices: 1

How many hours per week did you study course material? This means studying by yourself or with friends only. (Lectures, assignments etc. excluded.)



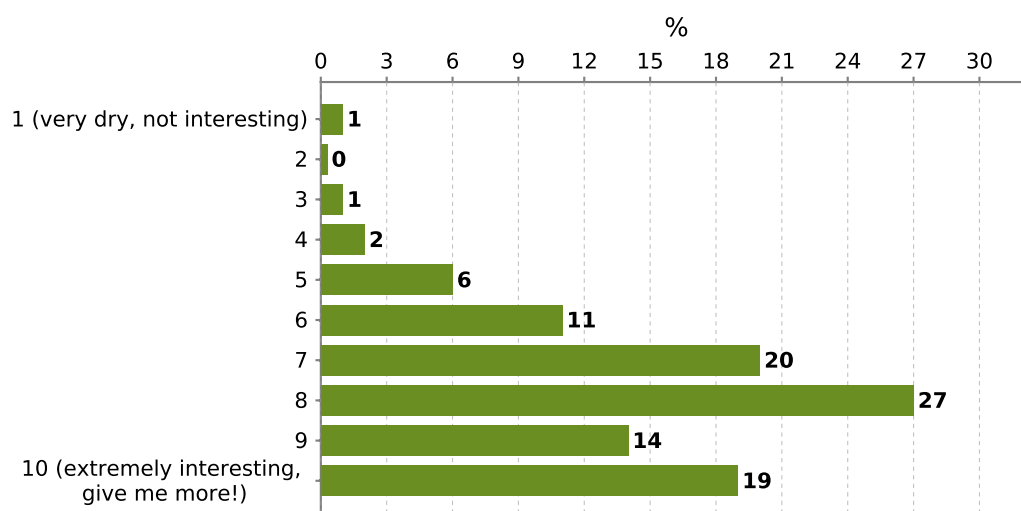
Number	Distribution	Answer choice
13	7,3%	0 - 2 hrs
39	22%	3 - 4 hrs
48	27,1%	5 - 6 hrs
33	18,6%	7 - 8 hrs
44	24,9%	9 hrs or more

Average (for numeric answers): 5,56

177 have answered of 301 (58%)

Maximum number of choices: 1

How interesting did you find the course?



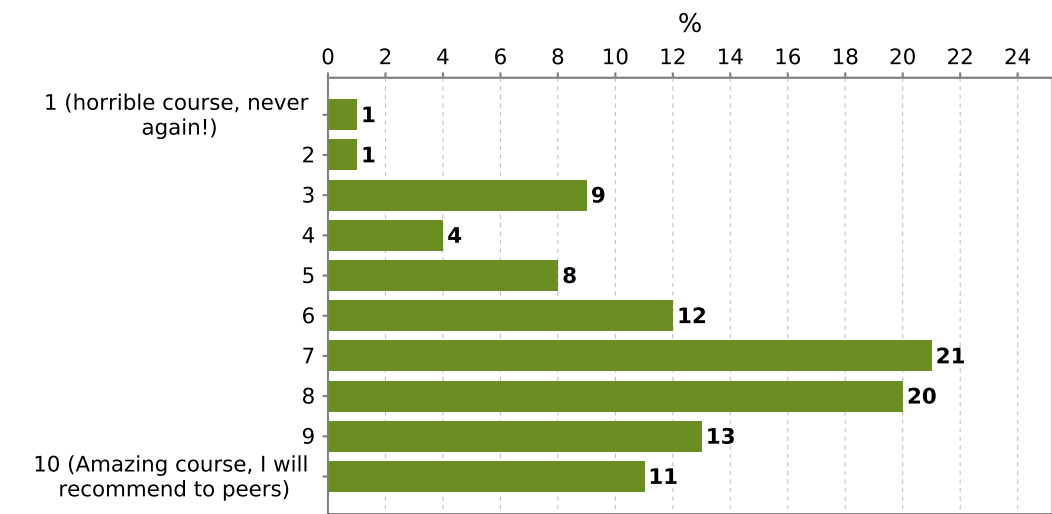
Number	Distribution	Answer choice
2	1,1%	1 (very dry, not interesting)
0	0%	2
1	0,6%	3
3	1,7%	4
11	6,2%	5
19	10,7%	6

36	20,2%	7
48	27%	8
25	14%	9
33	18,5%	10 (extremely interesting, give me more!)

Average (for numeric answers): 7,74

178 have answered of 301 (59%)
Maximum number of choices: 1

How would you rate the course overall?

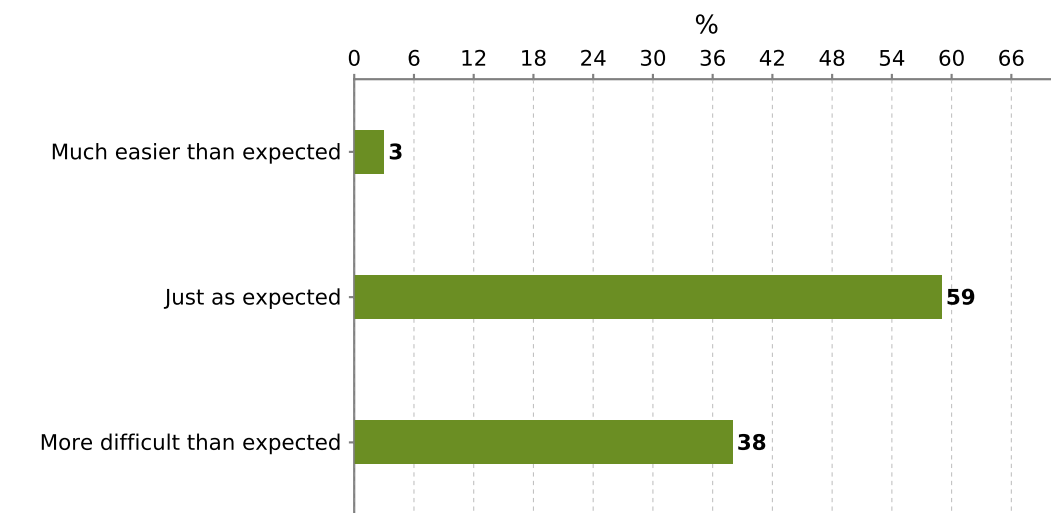


Number	Distribution	Answer choice
1	0,6%	1 (horrible course, never again!)
2	1,1%	2
16	9%	3
8	4,5%	4
14	7,9%	5
22	12,4%	6
37	20,8%	7
35	19,7%	8
23	12,9%	9
20	11,2%	10 (Amazing course, I will recommend to peers)

Average (for numeric answers): 6,93

178 have answered of 301 (59%)
Maximum number of choices: 1

About the expected difficulty of the course...

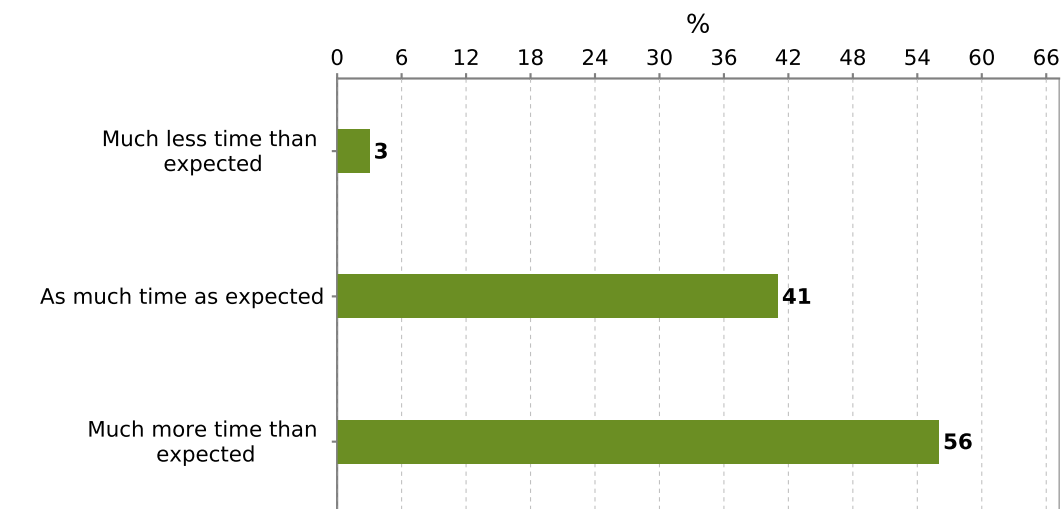


Number	Distribution	Answer choice
5	2,8%	Much easier than expected
104	58,8%	Just as expected
68	38,4%	More difficult than expected

177 have answered of 301 (58%)

Maximum number of choices: 1

About the time spent on the course...

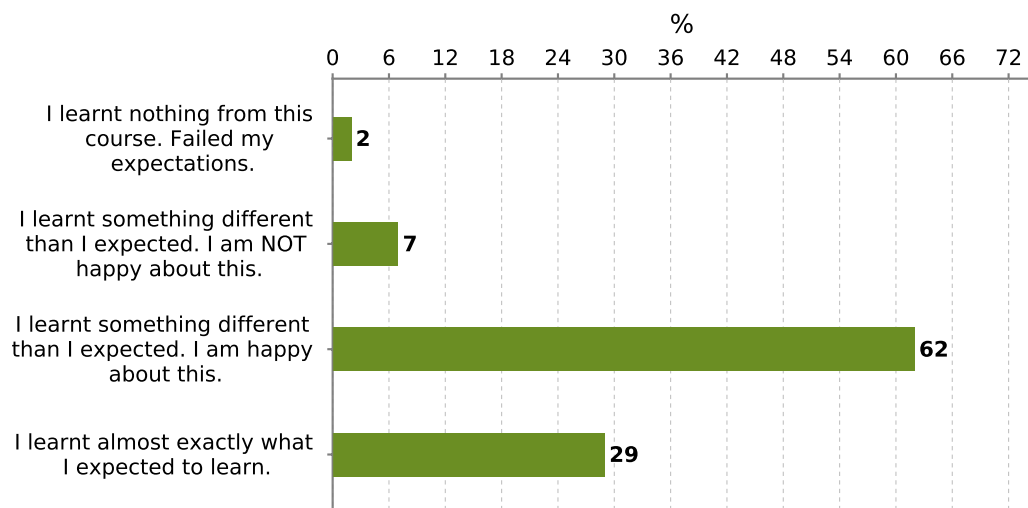


Number	Distribution	Answer choice
5	2,8%	Much less time than expected
73	41,2%	As much time as expected
99	55,9%	Much more time than expected

177 have answered of 301 (58%)

Maximum number of choices: 1

What best describes your learning outcome from this course?



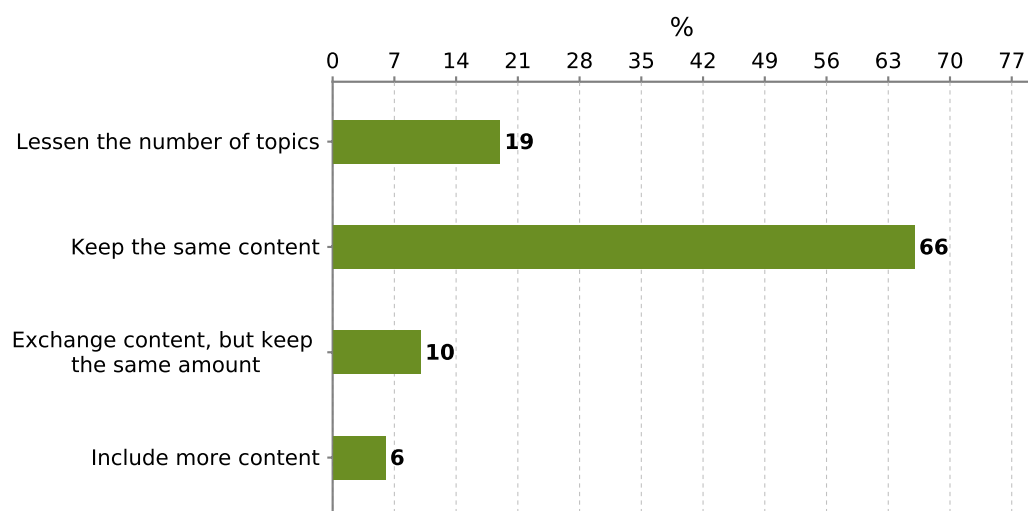
Number	Distribution	Answer choice
3	1,7%	I learnt nothing from this course. Failed my expectations.
13	7,3%	I learnt something different than I expected. I am NOT happy about this.
111	62,4%	I learnt something different than I expected. I am happy about this.
51	28,7%	I learnt almost exactly what I expected to learn.

178 have answered of 301 (59%)

Maximum number of choices: 1

How would you change the variety of content in the course?

Include in the comments, what you want to add/remove from the course content.



Number	Distribution	Answer choice
33	18,5%	Lessen the number of topics
117	65,7%	Keep the same content
17	9,6%	Exchange content, but keep the same amount
11	6,2%	Include more content

178 have answered of 301 (59%)

Maximum number of choices: 1

Respondents comments:

Too much variety, I think. Becomes too much varying information to handle, so ends up not having time to truly understand anything, because there was often only one lecture on a topic, and not enough time to read the book.

Since a majority of the course was spent focusing on projects or homework assignments, some lectures seemed only to serve as a distraction. If the lectures did not help me understand HMM's or NLP any better, then I did not feel they were a good use of my time. I did learn quite a bit about game playing, NLP, and HMM's but did not have any extra time or energy to invest in learning the other topics such as planning.

Since (not counting the project) only minimax and HMMs are examined to any significant degree at the moment, I think it would be interesting if you added some smaller labs (i.e. the kind of lab where you show up to the lab session and do everything there, following relatively detailed instructions) so we could get more hands-on experience with other methods too.

Some of the topic did not build off each that nicely.

The content was great! It gave a broad view on the field of AI. However, I wish we got time to put more concepts into practice, even though this might not even be possible to manage given the circumstances.

Good content - various and interesting.

It'd be great to see some real world applications of the topics.

Change the project to one more lab or something.

I liked the lectures and the fact that different AI topics were covered throughout the course.

One thing I think could be exchanged would be the ethics essay. I think a fun way of discussing ethics could be a case analysis, where the participants can discuss the ethical dilemmas.

The logic part of the course was interesting but too much similar to the logic course that the CS students had read already. I felt that the NLP content was much less than the time we put in to the NLP project. As such perhaps some logic content could be exchanged for more NLP.

Maybe focus a little more on some topics. I feel there were things left behind.

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Perhaps change the subject of the project to something more general instead of NLP only, maybe any one of the topics learned through the course.

I liked the three main blocks of content - search/CSP, NLP and Probabilistic reasoning/HMMs. The logic and planning part could in my view be spent on digging deeper into these main areas, in particular HMMs.

I feel like I learnt a lot just about the topics involved in the assignments/final project. I spent all the time on that and studied all the rest only for passing the quizzes (haven't got a deep understanding of those..)

Some lectures are only useful for a quiz. It seems useful at times when we have to cram for the homeworks or the project.

The part about the logic (with terms, atoms etc.) wasn't completely integrated with the rest of the course and it would've been good to have some more concrete example on how this is implemented in real systems. Maybe a smaller lab about this.

I do not think that the logic / decision making part will be very useful for me in the future.

last two lectures are not useful.

There was no time available at all to study the last topics (Logic and Planning), taking all other courses and the project into account, and since they weren't tested except for quizzes I think you can equally well skip those parts of the course.

I thought that the last lectures did not go deep enough to make them really interesting so maybe fewer topics.

Cramming a course with content does not make it better

especially the last ones seemed to not fit that well to the others. a smoother crossover would be more enjoyable.

+ a bit more of the project topic would be helpful, because the guest lecture for that was rly useless (in terms of the project), even though it was interesting.

I'd be nice to have some lecture on machine learning applied to search engines personalization and the problem of the filter bubble[1]. This might be included in the lecture covering the ethical implications of AI as an example of the dangers of hidden AI, i.e. what could be the consequences when AI is hidden from the users.

In particular, it's interesting to see what features Google uses when doing classification. Some examples can be found in their patents[2].

[1] http://www.economist.com/node/18894910?story_id=18894910&fsrc=rss

[2] <https://www.google.com/patents/EP1668550A1>

The last lectures about logic and after seemed a bit out of place and with the project and HW there were little to no reason to pay attention to them.

The content in this course is good, however the 2 laborations are very stiff in the sense that they can be done without actually thinking in an "artificial intelligence" way.. maybe include more logic? Dunno

should include more on game theory

There should be more knowledge on Natural Language Processing.

I think the number of topics was good, but we would have needed more time for it. Either reduce the number of topics of (preferably) increase the time given to complete it.

The project got a bit rushed because the field of nlp is so big. We only had time to very lightly touch the many different things related to nlp and then we had to do both a report and a presentation.

Maybe the quizzes and the project could be replaced by an exam with max C as a grade like in ADK? That would reduce the huge amount of shallow content.

Present the logic and planning lectures in a better way, maybe by using some related relevant content

the content are good. but keeping up with the homework is difficult. maybe it is good to have a tutorial session that is more private to ask question from TA

I don't think variety is the problem with this course.

I found boring the lecture about logical notation

The content was fine but the distribution over the course was weird. One week we were expected to be finishing Duck Hunt (tuesday), ethics essay (friday), three quizzes (tuesday and wednesday) and also be halfway through the project (monday). Couple this with the fact that we take 3 additional courses... Sacrifices had to be made.

The logic part felt rushed and not clearly thought through.

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With so much to do, it becomes a a hectic task to manage with other subjects. It took a lot of time considering the fact that even after applying the concepts, we were not able to get good score on Kattis.

I liked that we started out writing a simple AI that is "hard-coded", in a game that is well defined, and then moved on to more challenging topics, like natural languages in the project or machine learning in the Duck Hunt assignment.

There seemed to be such high expectations on everything on the project that we found it hard to know what to put most of our quality work. In the end, it seemed like we spent more effort than needed into the deliverables (report and presentation) that we could have put into AI.

Instead of one large project at the end, I would have liked one or two more homework assignments with more focused topics. There was much interesting stuff in the literature which we didn't cover other than in the quizzes.

Keep the same content, but keep the workflow more effective. During this semester it was terrible having THREE different things going on at the same time for the same course. Please exchange the entire Teaching Assistant crew because they were extremely unprofessional and need to be revised regarding being in the role as a teacher and showing respect to their students.

Yet, maybe adding some content about NLP : I would have enjoyed to see some practical NLP techniques, main algorithms, tips and tricks...

Bu I understand that the project part involved some research on our own, and that we should have learnt things from our research.

Some lectures (like logic) wasn't a bit less interesting

Personally I would've liked to see more of the Deep Learning, the logic part was really interesting, but got a smaller part than it should have.

The content is okay, it just feels though as if you sit through lectures in order to answer quizzes, then when a quiz is passed, you disregard entirely from the "knowledge" you've gained, which is very shallow knowledge.

I don't find the Lecture 10 on Logic and Representation of Knowledge much useful. I think a little more emphasis can be given on MDP and POMDP. I think the lecture 12 was really quick. Since there were no exercise attached to 'Decision Process' topic, I did not learn much from those topics. It would be great if they can be included into homework assignments to some extent. May be you can include it with checkers if possible.

The logic and POMDP lecture were not as interesting as the rest

Exclude logic and planning. Expand HMM and search further.

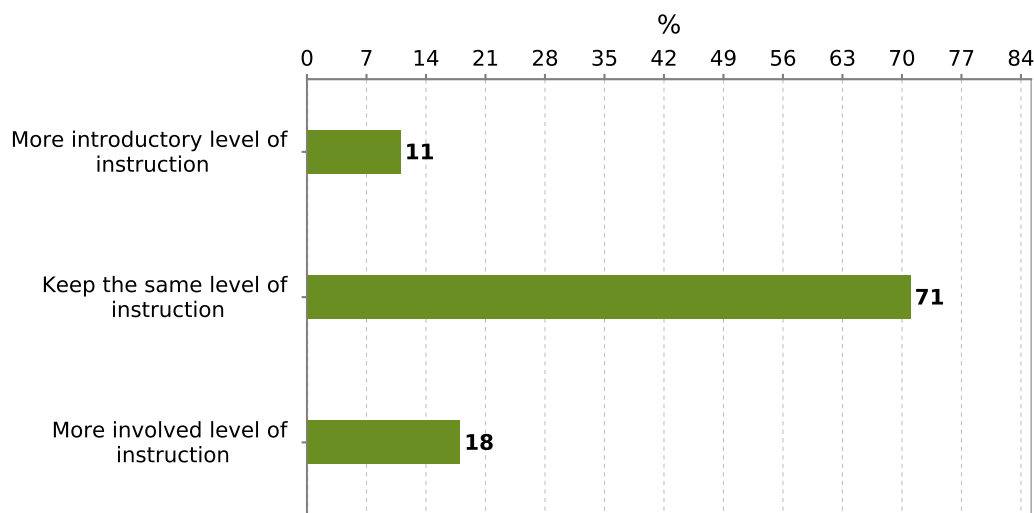
As the course did not go into deep into many topics, they didn't give so much. So its better to spend that time on the more "core" subjects.

Please include more interesting parts of logic and planning, and quicken up the introduction to the field.

How would you change the level of instruction (to what extent you learn about each topic in the course content)?

Clarification: This is about how deep or thoroughly you understand the topics. This is not a reflection of what is taught or how it is taught.

Please include comments if you want to change something specific.



Number	Distribution	Answer choice
20	11,4%	More introductory level of instruction
125	71%	Keep the same level of instruction
31	17,6%	More involved level of instruction

176 have answered of 301 (58%)

Maximum number of choices: 1

Respondents comments:

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I think given the amount of time spent on each topic, the level of instruction was fine.

For someone completely new to working with the components that make up AI, I feel the level of instruction was sufficient to get me started! I also felt that there were assistants and resources to take me to a deeper level of understanding if I put the time and effort in.

I feel I know more about the contents that were used in the lab and the project than anything else that was covered in the lectures. The quizzes did bring some insight and a understanding of the covered topic but it didn't make you understand the topic as thoroughly as a HW would.

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More involved level of instruction in some topics and more introductory level of instructions in other topics. My opinion is that the course is very 'solid' as is, but there as topics which seem more interesting/important than others which could be taught more in-depth.

I think the Search/CSP part of the course had a good pace/depth balance. Some parts could have benefited from additional lectures: e.g. HMMs were probably the most difficult concept and an additional lecture on this would have been beneficial (following the calculations in the Stamp article). Other parts, like the logic lecture felt a bit rushed: I would have remembered more of this from a more high-level slower paced lecture.

As an introductory course, I think it was a good mix of breadth and depth.

the exercise lectures helped really a lot for understanding the practical content (for HMM a must have).

I'm really interested in the mathematical background of stochastic processes, especially regarding their generalizations to random fields. I'm not thinking about specific lectures on Mathematics, but rather about some pointers to further reading to get the proper mathematical formalization of the underlying mathematical theory of AI.

Personally, I don't feel really confident with a subject until I understand the general mathematical theory behind it.

For instance, for HMM re-estimation with the Baum-Welch algorithm, it would have really speed up my study to have some pointers to Calculus, to understand what is the role of maxima of the gradient used by the algorithm to maximize the likelihood of the parameters.

If the assignments change (i.e. the laboratory assignments) the instructions should be rewritten.

the time is limited for this course, so I think that it would be better keep more on introduction

I would have preferred a more involved level of instruction, but I don't think that it would be possible with the limited amount of time given.

different for different topics -
go more basic for the search algos and logic and planning lectures
more advanced on the probability lectures
HMM was reasonably explained.

more example and tutorial for homework

Overall, the instructions were good for each topic. The only problem I had was that NLP was barely introduced at all. Yet 3,0HP (half the course) was based on it. A brief guest lecture is not enough if you expect good results.

For the HMMs, I would have liked a more involved level of instruction, but for Checkers I thought the level was fine.

I feel like we glanced at a lot of advanced stuff but there was never really any requirement of us understanding it. Especially with the alpha. beta and di-gamma functions.

It is a non-specialized course in many ways. That's why I think it's good that it is at a not so involved level. Instead it touches on a few interesting topics without being too introductory.

dnt think i understand the question but it was probably good

The instructions should be provided well before the tasks. The HW2 understanding was clearer after the HMM exercises. Had the exercises been conducted before providing the task, we would have got a better knowledge and understanding. Currently, the exercise sessions were given after the task was assigned.

The only topic I had a difficulty understanding from only the lectures was the topic Logic. This might be because I haven't taken a logic course before, which I believe some students have. For me it would have been nice to have a bit more introductory level of instructions for that particular topic.

If you are a KTH student, chances are you haven't had a chance to study HMMs. I would have liked some more detailed instruction how to use them "properly". As it is, I have "hacked around" with HMMs in duckhunt but still am not sure if I did it right, could I have done it better, how would it be better etc.

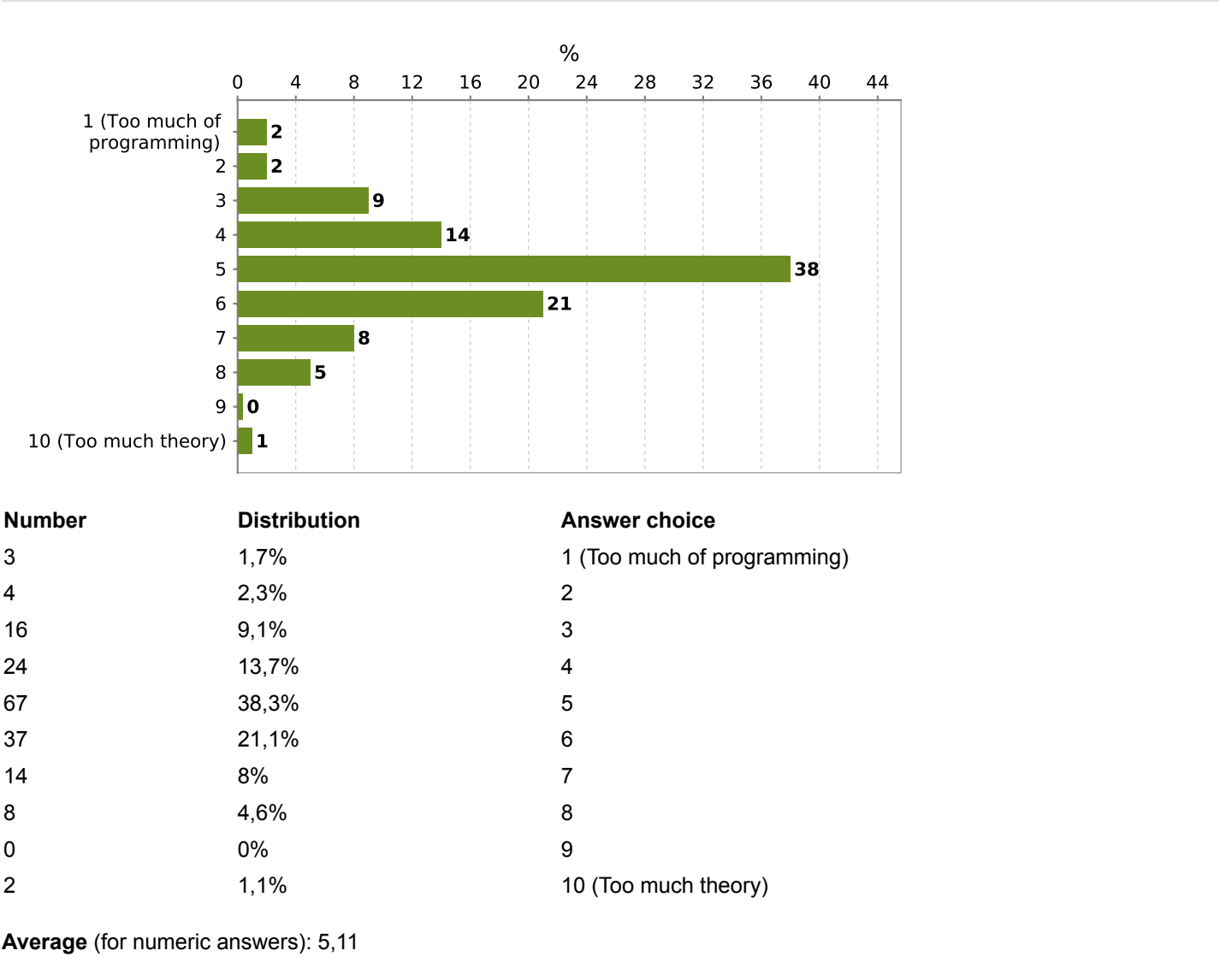
See above, I feel that we get to learn very shallow parts about a whole lot of AI that is never applied or digged into deeper, causing the learning to be very inefficient.

Less on HMMs, you put way too much effort in this topic by telling people it is so damn difficult over and over. It really is not and people would not think so unless you keep saying that it is. More about NLP, another lecture would have been great rather than just the guest lecture.

Please include more interesting parts of logic and planning, and quicken up the introduction to the field.

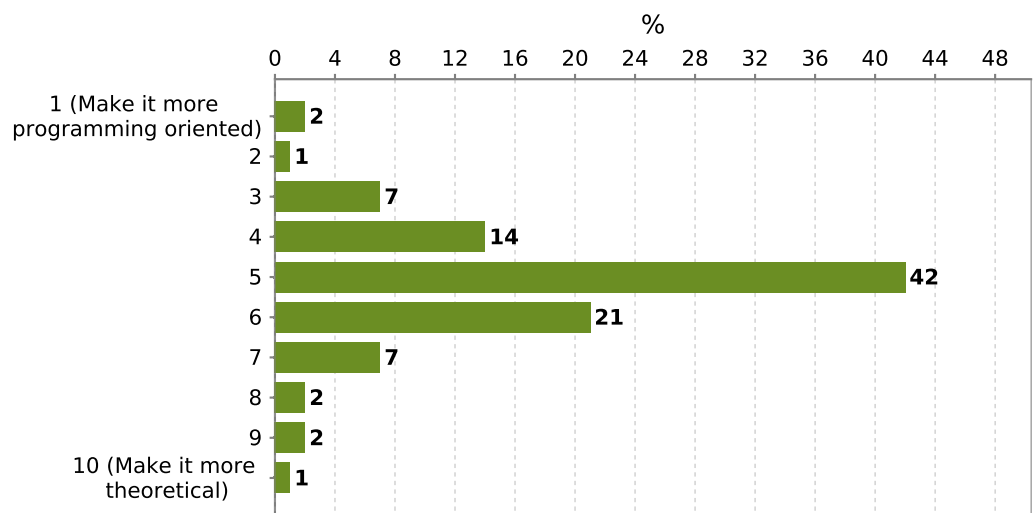
Theory vs. Practice: How do you think the course is organised now? Since there is limited time, we are constantly at a battle

to balance the amount of theory and practice.



175 have answered of 301 (58%)
Maximum number of choices: 1

How would you want the course to change with respect to balance between theory and practice? (Follow up of previous question)



Number	Distribution	Answer choice
3	1,7%	1 (Make it more programming oriented)
2	1,1%	2
13	7,5%	3
24	13,8%	4
73	42%	5
37	21,3%	6
13	7,5%	7
4	2,3%	8
3	1,7%	9
2	1,1%	10 (Make it more theoretical)

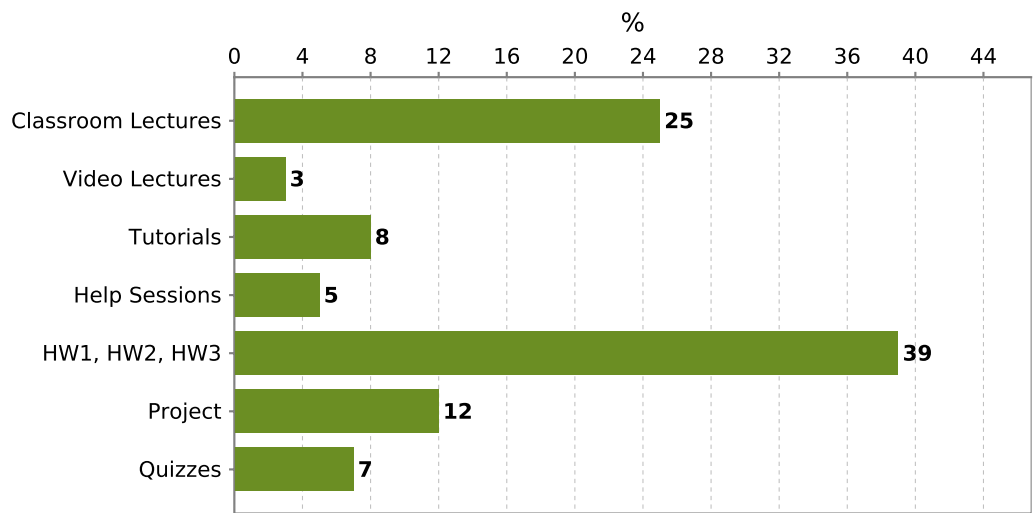
Average (for numeric answers): 5,17

174 have answered of 301 (57%)

Maximum number of choices: 1

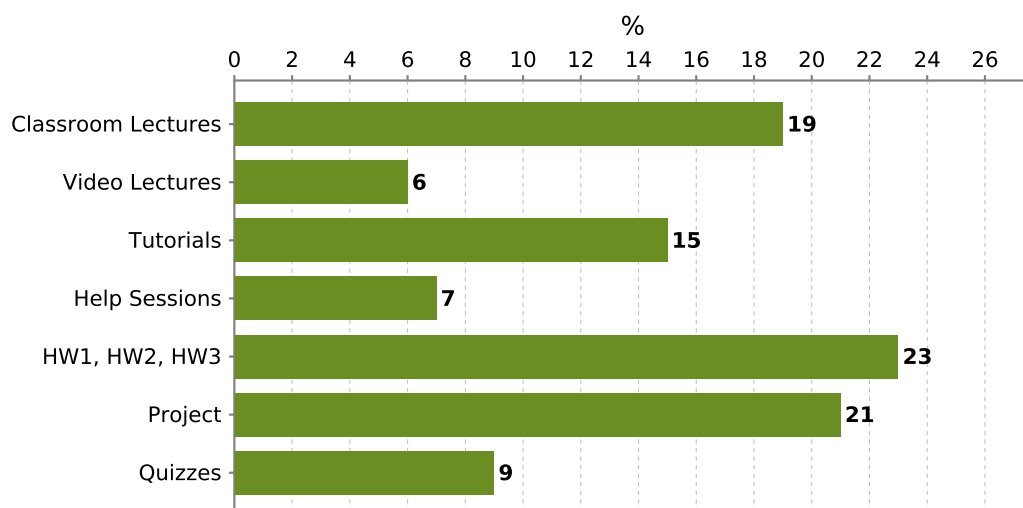
Order the following aspects of instruction according to how useful they were. This is for us to understand what we should do more for you to learn more and better.

1



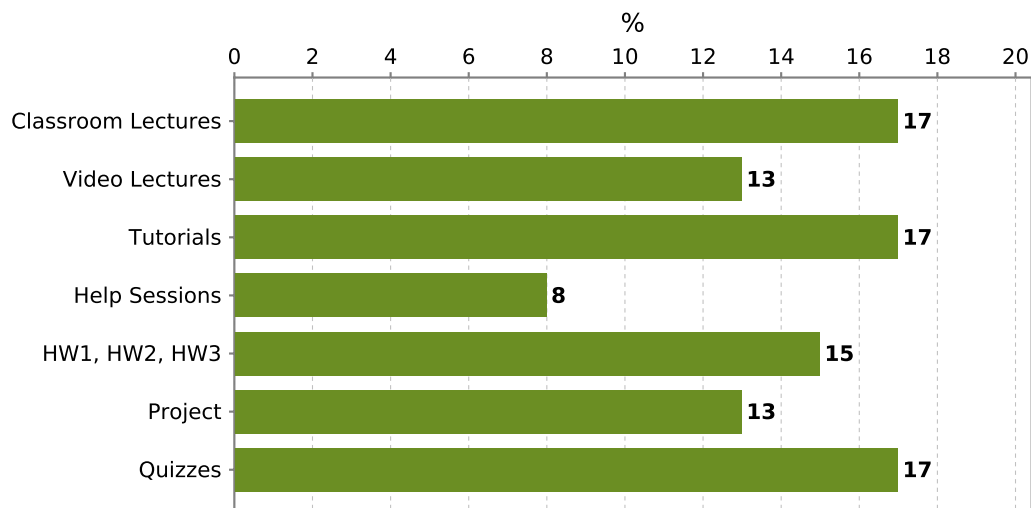
Number	Distribution	Answer choice
45	25,3%	Classroom Lectures
6	3,4%	Video Lectures
15	8,4%	Tutorials
9	5,1%	Help Sessions
70	39,3%	HW1, HW2, HW3
21	11,8%	Project
12	6,7%	Quizzes

2



Number	Distribution	Answer choice
34	19,1%	Classroom Lectures
11	6,2%	Video Lectures
26	14,6%	Tutorials
13	7,3%	Help Sessions
41	23%	HW1, HW2, HW3
37	20,8%	Project
16	9%	Quizzes

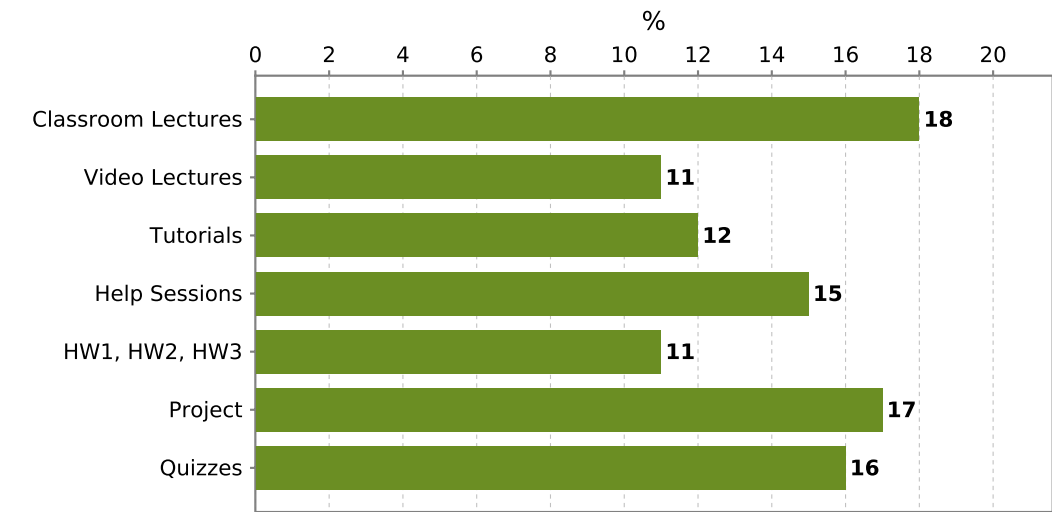
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Number	Distribution	Answer choice
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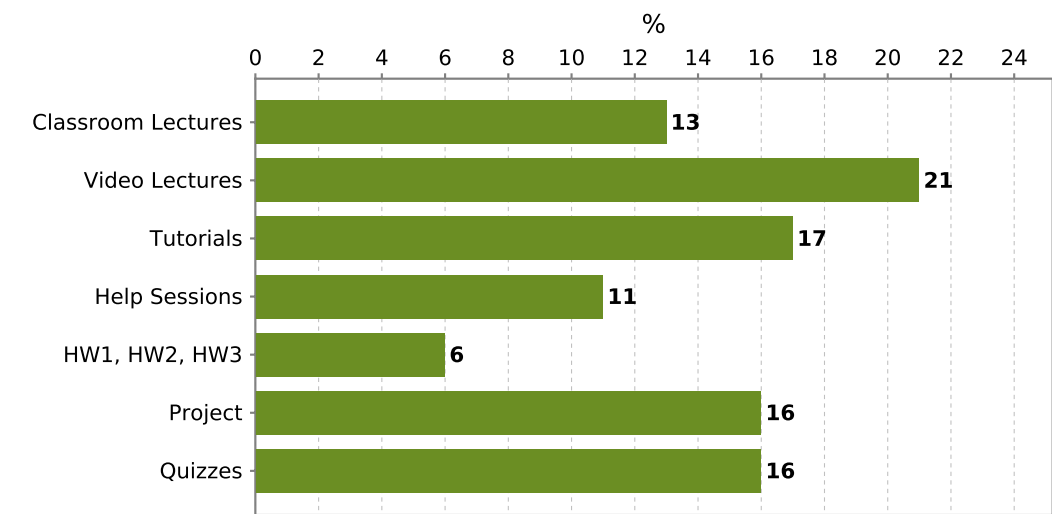
30	16,9%	Classroom Lectures
24	13,5%	Video Lectures
30	16,9%	Tutorials
14	7,9%	Help Sessions
26	14,6%	HW1, HW2, HW3
24	13,5%	Project
30	16,9%	Quizzes

4



Number	Distribution	Answer choice
32	18%	Classroom Lectures
20	11,2%	Video Lectures
21	11,8%	Tutorials
27	15,2%	Help Sessions
19	10,7%	HW1, HW2, HW3
30	16,9%	Project
29	16,3%	Quizzes

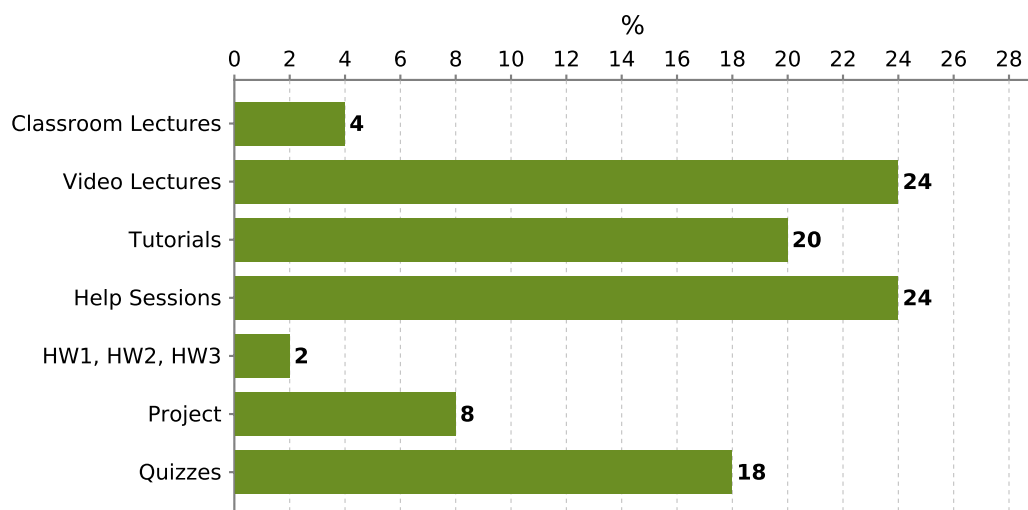
5



Number	Distribution	Answer choice
24	13,5%	Classroom Lectures

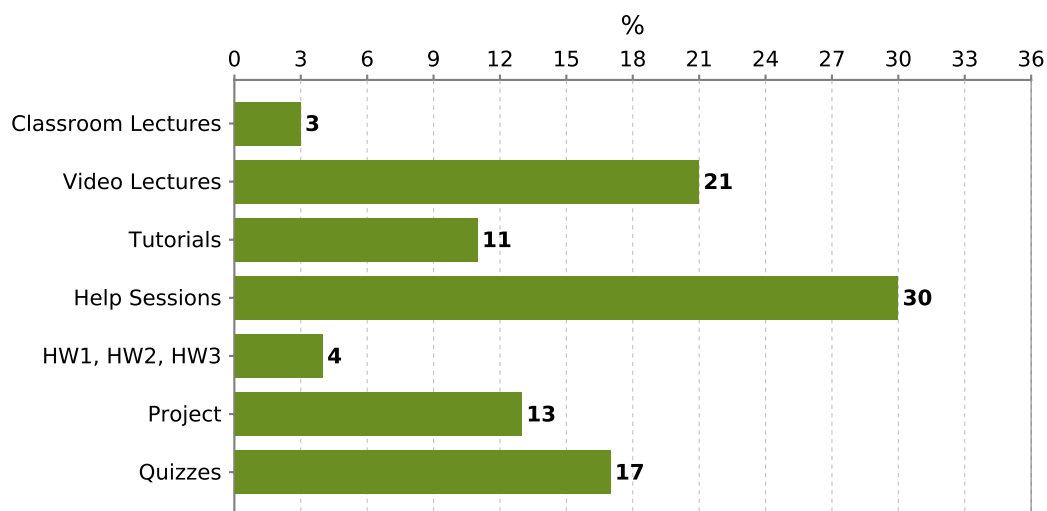
37	20,8%	Video Lectures
30	16,9%	Tutorials
19	10,7%	Help Sessions
11	6,2%	HW1, HW2, HW3
29	16,3%	Project
28	15,7%	Quizzes

6



Number	Distribution	Answer choice
7	3,9%	Classroom Lectures
42	23,6%	Video Lectures
36	20,2%	Tutorials
43	24,2%	Help Sessions
4	2,2%	HW1, HW2, HW3
14	7,9%	Project
32	18%	Quizzes

7



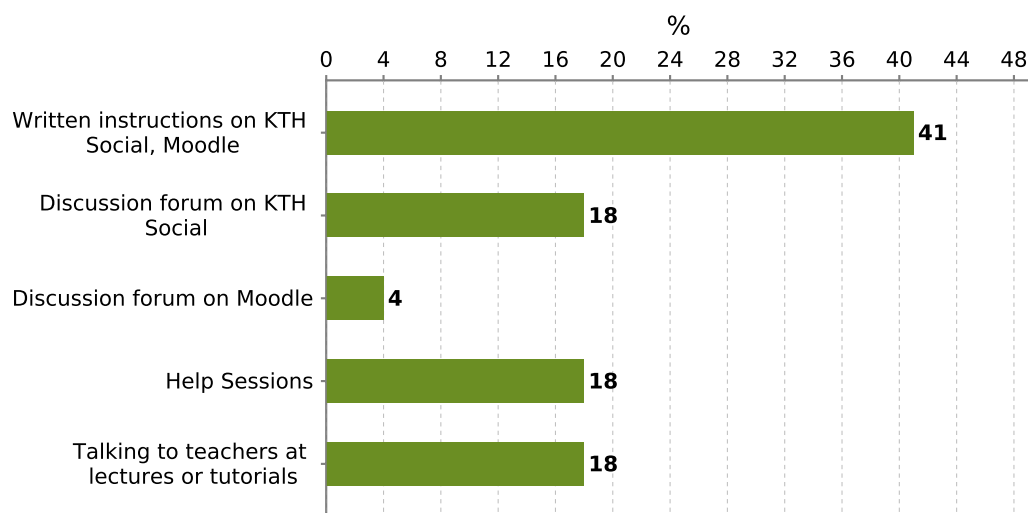
Number	Distribution	Answer choice
6	3,4%	Classroom Lectures
38	21,3%	Video Lectures

20	11,2%	Tutorials
53	29,8%	Help Sessions
7	3,9%	HW1, HW2, HW3
23	12,9%	Project
31	17,4%	Quizzes

178 have answered of 301 (59%)

Maximum number of choices: 7

Which way do you prefer most to get information AND help about different aspects of the course?



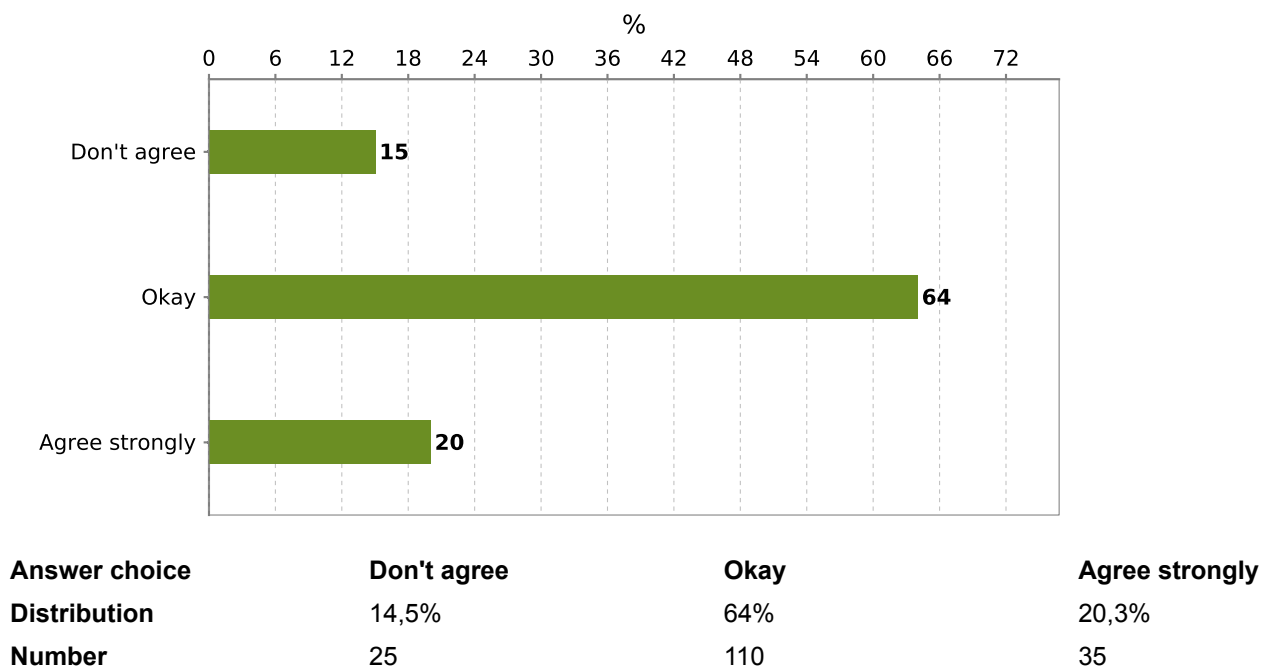
Number	Distribution	Answer choice
73	41,5%	Written instructions on KTH Social, Moodle
32	18,2%	Discussion forum on KTH Social
7	4%	Discussion forum on Moodle
32	18,2%	Help Sessions
32	18,2%	Talking to teachers at lectures or tutorials

176 have answered of 301 (58%)

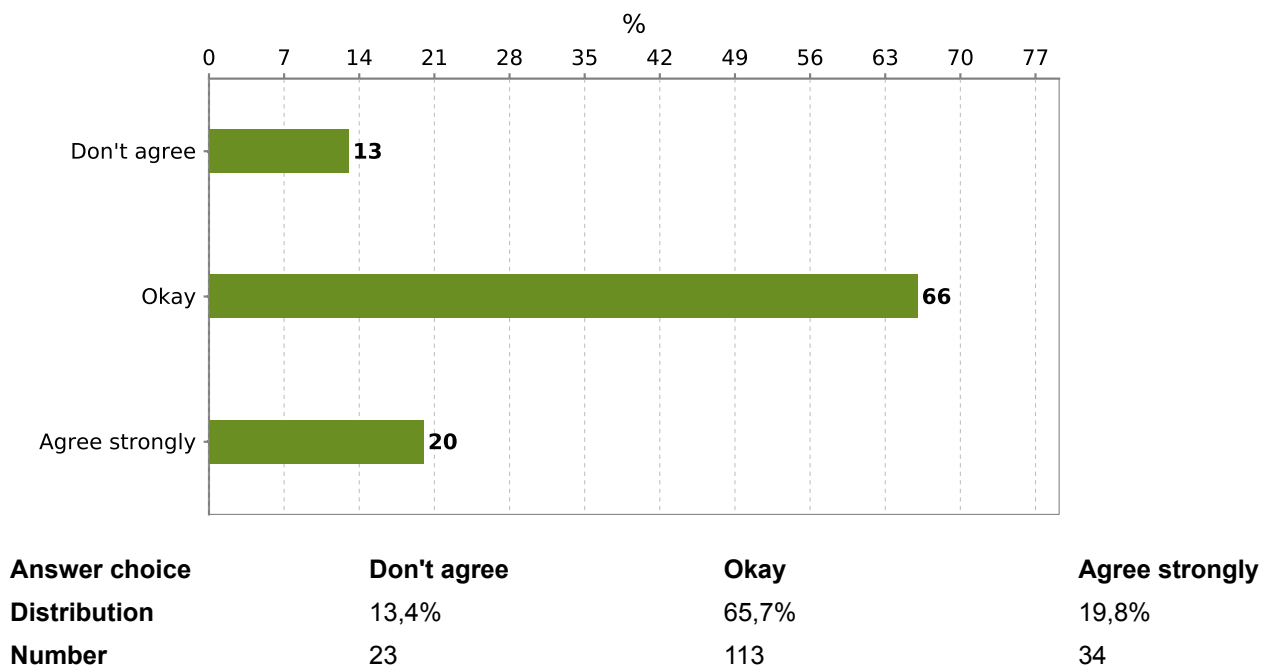
Maximum number of choices: 1

Effectiveness of using Moodle as a portal for the course. Please choose one choice per row.

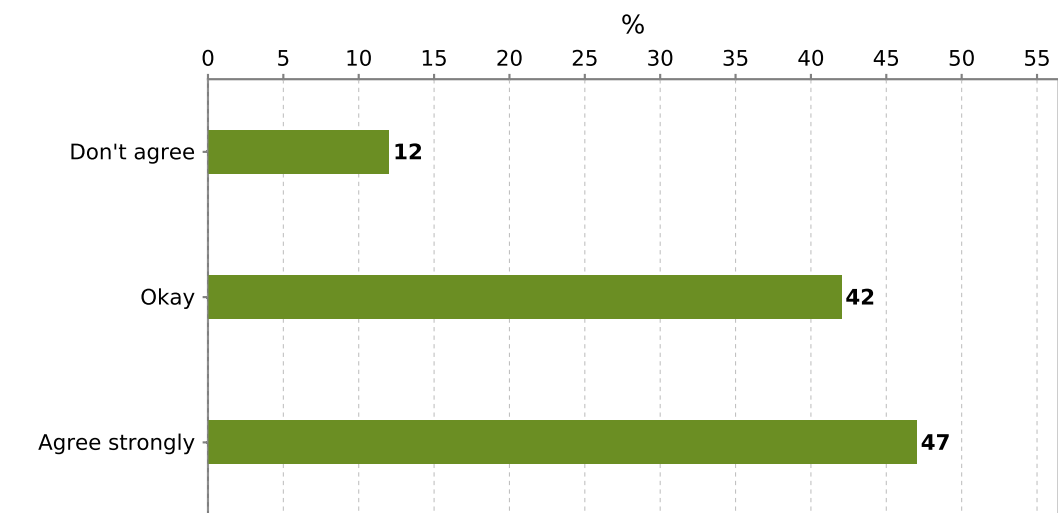
Answers from TAs on the discussion forum helped



Answers from other students on the discussion forum helped

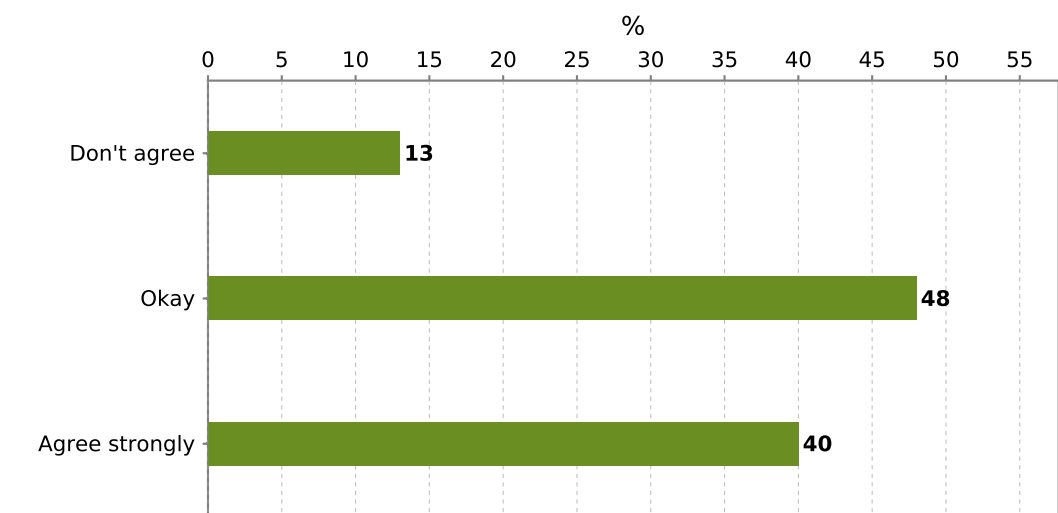


It was a good tool for organising submissions



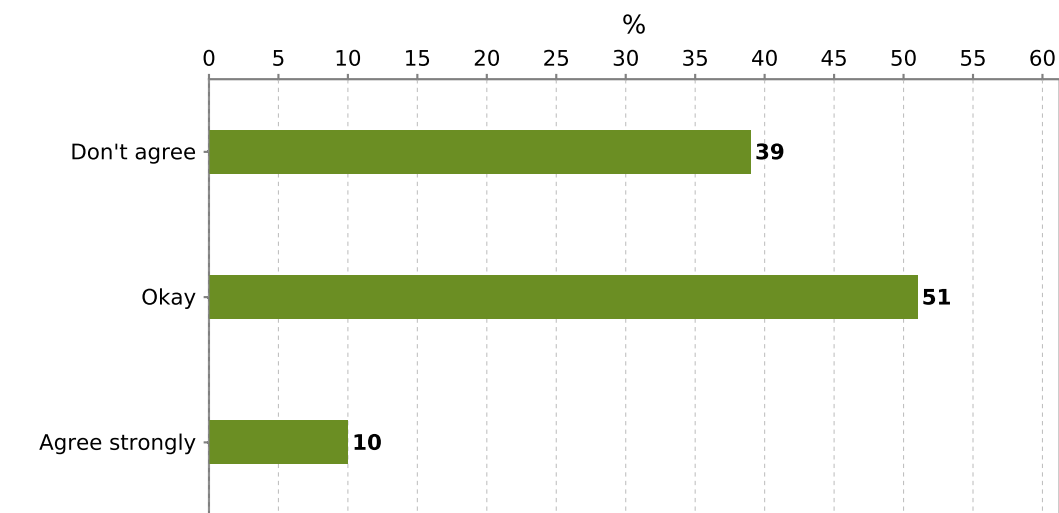
Answer choice	Don't agree	Okay	Agree strongly
Distribution	11,6%	42,4%	47,1%
Number	20	73	81

It was a good tool for scheduling appointments



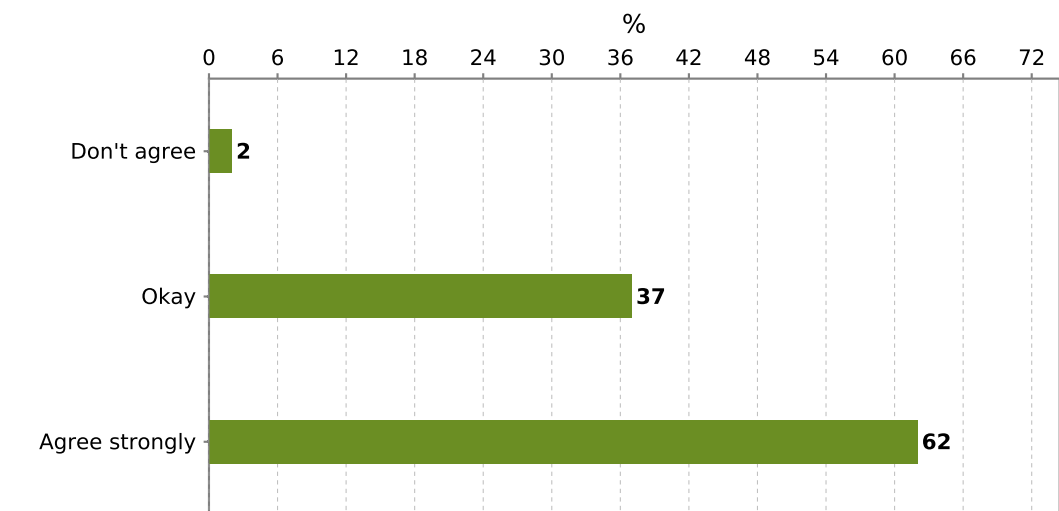
Answer choice	Don't agree	Okay	Agree strongly
Distribution	12,8%	47,7%	40,1%
Number	22	82	69

It was a good tool for forming and communicating with group members



Answer choice	Don't agree	Okay	Agree strongly
Distribution	39%	51,2%	9,9%
Number	67	88	17

It was a good tool for attempting Quizzes

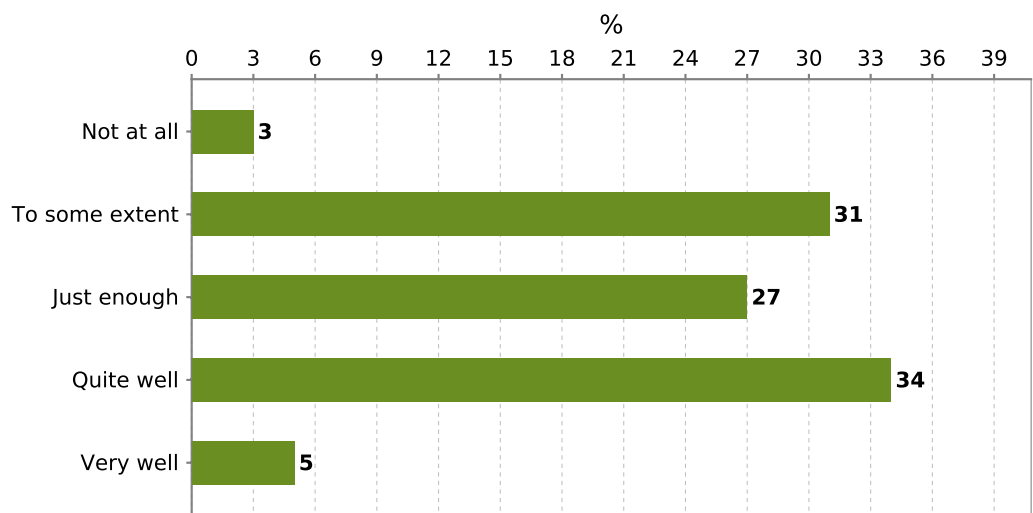


Answer choice	Don't agree	Okay	Agree strongly
Distribution	2,3%	37,2%	61,6%
Number	4	64	106

172 have answered of 301 (57%)

Maximum number of choices: 3

Did the lectures prepare you for the assignments?

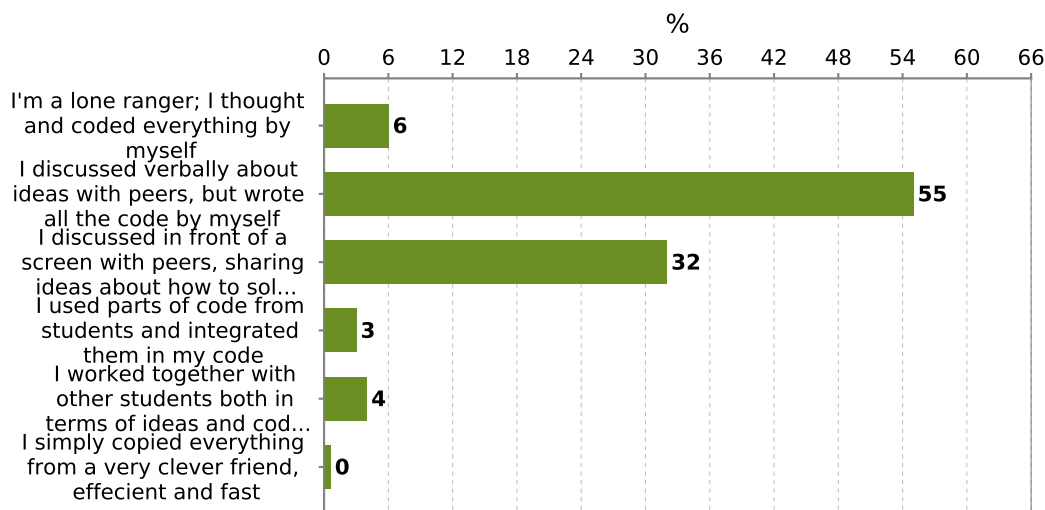


Number	Distribution	Answer choice
6	3,4%	Not at all
54	30,5%	To some extent
48	27,1%	Just enough
61	34,5%	Quite well
8	4,5%	Very well

177 have answered of 301 (58%)

Maximum number of choices: 1

For the homeworks and project, how much have you coded by yourself and how much have you obtained through collaborating with other students? (remember that it is anonymous)

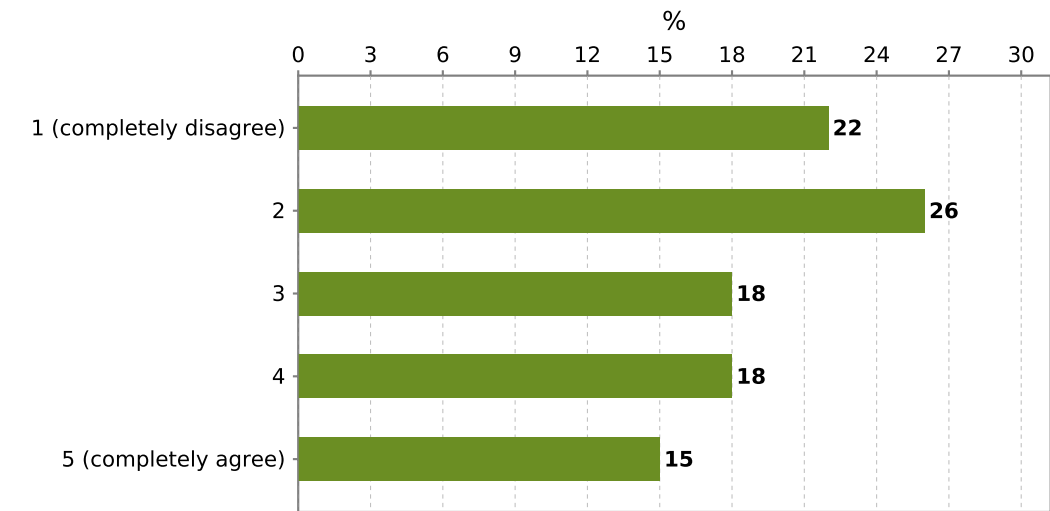


Number	Distribution	Answer choice
10	5,6%	I'm a lone ranger; I thought and coded everything by myself
98	55,4%	I discussed verbally about ideas with peers, but wrote all the code by myself
56	31,6%	I discussed in front of a screen with peers, sharing ideas about how to solve specific coding problems
6	3,4%	I used parts of code from students and integrated them in my code
7	4%	I worked together with other students both in terms of ideas and code, but then I changed the code to make it look different

177 have answered of 301 (58%)

Maximum number of choices: 1

6hp credit points is justified for the amount of efforts this course demands of the student.



Number	Distribution	Answer choice
40	22,5%	1 (completely disagree)
47	26,4%	2
32	18%	3
32	18%	4
27	15,2%	5 (completely agree)

Average (for numeric answers): 2,77

178 have answered of 301 (59%)

Maximum number of choices: 1

Things you liked/appreciated about the course:

Text answers:

The project was so much fun! I liked the quizzes for things that may not have warranted entire assignments but were still good to know about, the quizzes were good for learning those concepts at a basic level.
Akshayas övningar about HMM with worksheets were awesome.

Lectures, HW1/2

I liked the project part of the course, it was very interesting to look at existing applications of AI and try to create something of your own and present it.

Good content

Mostly everything.

The quizzes were a clever way to guarantee a fair amount of understanding of each topic without the pressure of a long and exhausting exam.

-

I feel that my level of understanding in the topics surrounding the assignments is much stronger after completing the course. While the assignments were difficult, I think they were great in hindsight. I found some of the lectures to be very interesting, while others were very dull. I appreciate the idea behind a survey course in AI for getting a sense of the frontier and the history of AI systems.

Lectures and Quizzes were pretty good. Good amount of material.

It was just really interesting, things I have thought about how it works before the course got explained.

I really appreciated the homeworks and quizzes.

The quizzes and the labs!

It was interesting. The quizzes were a good way to check if you understood the material.

The homework assignments that allowed us to put new knowledge and concepts into practice. Checkers and Duck hunt assignments were very fun to do and I learned the most from them, apart from lectures and reading.

Good teacher and interesting subjects.

The homework tasks were really good. However, it'd be better if we could apply the concepts to a real world issue.

- Interesting lectures
- Interesting topics
- committed teacher and tutors
- quizzes

I liked HW1 and HW2 because they were interesting and I got to write some code.

The topic! The lectures were also very good, and nice that we got to hear a bit about the state of the art such as self-driving cars. It really helped build up motivation.

The content was a lot more interesting than I first thought it would be. I didn't think that much of AI prior to the course, but I find it a very interesting subject now and intend to read additional AI courses. What I liked the most was the theoretical approaches to learning, and how the HW's gave a hands-on experience on experimenting with them.

Great lectures, I found myself really listening "spontaneously", just out of interest, that was a nice feeling. Also really great and well-prepared tutorials. I appreciated the assignments which I found were very good for learning and very fun despite the hard work. There was help to be had at the help sessions so that was cool, and the discussion forum was good for that matter too. Overall HW1 and HW2 were very nicely organized I felt. The project was a bit more loosely contoured which in the end I guess was rewarding to because you had to organize something yourself, and I think I learned from that.

The homeworks were very interesting

The teaching was great, content was really ok. The only part that I didn't get 100% was Hidden Markov models, maybe that part needs to be worked a little, I think was quite confusing topic and was a little fast.

The labs were funny, and Patrick had a nice flow in the lectures.

Well executed and organized course, especially with the huge amount of students!

Sorry to say but this was one of the most unproductive times I have ever spent on a course.

I liked the tutorial sessions. I think they helped me through the course.

I liked the labs but they took way too much time.

Having lectures on video is a brilliant idea. Being able to pause and think before continuing and then perhaps go back to hear a specific explanation again is very useful. A video lecture is much more useful than the slides on their own. Missing a lecture can be very detrimental as slides can be difficult to understand without someone explaining them. With this solution the problem is mitigated somewhat.

I watched the video about basic search and I think it was quite well done. The fact that the TA was not just talking but also drawing pictures and bringing up examples was an important part. The video would have suffered greatly without having the TA drawing as he was talking. This is something that I would recommend lecturers do even when giving "normal" lectures. That is, drawing pictures and showing examples on the black board as opposed to just using pre-made slides. If you draw an example on a black board and explain as you go it is easier for students to follow and they can interrupt and ask at anytime. It can also lead the lecturer himself to realise when something in the example might need additional comments. You start drawing something and you suddenly go "Oh wait, let's do it like this instead" in order to clarify a point on the go. This does of course take more time than just showing slides and explaining them, so you can't do this for everything but it is something to consider.

So kudos to those who thought about using video lectures in this course. I think you should continue to experiment with them next year. You could try having some lectures be given as normal and also upload a video version. This could be done in two different ways.

1. You could record the actual lecture and then upload it as a video. Might be problems with lecturer or students feeling uncomfortable about being on video.
2. You could record a lecture as a video in the same manner as you did with the basic search this year and also give the lecture like normal.

I think I would prefer option two.

Note that I don't think you should substitute all lectures with videos though. Normal lectures is one way to meet others and discuss the material and being able to talk to the lecturer in person is useful.

Lectures and homeworks.

The practical Assignments

The lectures, the idea of the project assignment, the quizzes system and how the homeworks gave us a very good understanding of the topics they regarded.

HW1 and 2 were great. Not too interested in HW3, ethics material could have been kept lecture-only.

I liked the 'problem selection' aspect of the project, being presented with a range of options.

I liked the grading system.

Very practical

Interactive tutorials by Akshaya.

Very well thought out and organized lectures by Patric.

The quizzes were a good way to revise the lectures and keep the learned in mind (in case of probability it was a good preparation)

The way the homework were graded seems very good and fair the oral exam was made in a good way.

The grading for the project with the range grading is very good it does balance the fact that it is a 4 people team and if you are unlucky you have to do a lot more than the rest (Not the case for our group but with 71 group this seems to be unavoidable)

The lectures from Patric were very good the essential parts were clear on display.

Fun and exciting topic. I like that there are real world examples of how it's used. Patric was a great lecturer with good enthusiasm and understanding

Just LoL @ the black boxing at the project everyone did, haha, still laughing at this.

need programming

I like the 2 assignments. They help us understand what is taught in class and do practical programming to master it.

Learned about logic which I had not previously had any lecture about.

The topics! Although I'm more interested in the cognitive aspect of AI, the Search and HMM parts of rational agent design is interesting.

The to the point attitude towards the mathematical aspects of things was great. Not dabbling in the specifics of maths and instead seeing the effects was helpful.

The HWs were great hands-on experiences.

The project was actually fun to do.

I found the course content to be very interesting and the homeworks were well suited for my newfound knowledge. It was nice that an HMM class was provided in HW2, but that we could still create one from scratch if we wanted to.

- The help one could get at help sessions.

- Quizzes seem to be a good idea to make sure that all content is covered in some way as there is no time for more homeworks.

- I think it is good to only grade the project in grading ranges as it is a very open task and as people rely on many other group members.

Patric really knows how to hold the lectures. One can follow him most of the time and he is a great person listen to. Keep the enthusiasm up! ;)

The exercise sessions with Judith also were great, as she rly took time for some specific problems (specially within the HMM topic, as this was quite hard for many).

More practical approach towards the Artificial intelligent.

I really appreciated how the course was organized. I come from a purely theoretical background, so homework assignments were very useful to gain hands-on experience, and completely changed my perspective of machine learning. It was good to have some skeleton for each homework, as it was very helpful to read some code written by professionals.

The first introductory lecture was very useful in order to estimate the amount of time needed to properly prepare for the course. This affects my answers concerning the expected difficulty and time spent on the course. If I hadn't known that the course had been in general perceived as difficult by students, I would have had different priorities, and probably got a lower grade.

I really appreciated the smaller Project help sessions (the last two), where we could talk with the teaching team about project-specific problem. That gave my project group a big boost in confidence, that allowed us to work better together and get an A.

The content of lectures is enlightening.

It was interesting and I learned alot.

It covered the areas i thought and i don't feel like i missed out on any important information. Overall good content.

Good information about AI and good introductory. Good laborations (maybe change duck hunt a bit, specially the guessing

part).

Videos of robots using techniques discussed in class (was motivating to see), I learn and remember better when I do instead of just reading about the techniques, therefore labs and the project was very good for my learning. Also liked to be able to discuss with TA:s during help sessions and presentations of the labs.

It was clearly structured and it was interesting and fun to go to the lectures. The tutorials and the homework were very helpful to get a deeper understanding of the course's content. And most of the basic knowledge were covered in video lectures and if the content was already familiar it was not necessary to watch the video lectures.

The laboratory assignments (first two) were fun and relevant.

The quizzes were very nice. Some questions were not formulated as questions which could be confusing at times. Maybe these could be looked at? I liked that the lecture slides were on social before or very close to the lecture itself.

Interesting field, engaged teachers

Very Practical!

The combination of different media types: quizzes, assignments, projects...

Tutorial sessions

Interesting subject.

Interesting lectures, interesting homeworks and project. The quizzes were very good, making sure you learnt something from every lecture. However, some lectures in the end felt a bit irrelevant or too complex, but that is a tiny detail.

It's an interesting course on an interesting subject. I learned a lot of things during it. It made me more interested in the subject, I want to keep studying about it.

the content, AI is very interesting. it is also good that the exam is presentation and not written

Patric Jensfelt is one of the best lecturers I have had during my years at KTH, and it's been a pleasure to go to them. He combines very well the research that is being done at KTH with the theory, and it is done humorously and casually. The guest lectures were also very good.

I loved all the content. AI is an extremely interesting field and I had fun. I like point-based kattis assignments because they give you something to work for.

HW1 and HW2 were fun, and HW3 was a nice change of pace from how KTH classes usually never deal with the humanities, but it could have been integrated better with the rest of the class, and could probably have benefitted from a cooperation with the Vettig course. The project was fun. Moodle had good parts.

Loved HW1 checkers: It was easy to understand the task and required understanding of the theory. It was good amount of information from lectures to this beforehand.

Project is always nice. Although time was very limited on this.

I liked the fact that this course is very well organized. Firstly, there are many TAs at the students' disposal: this is very good! Secondly, the content is assessed in some way (Quizzes, HWs, Project), which is very nice. I definitely enjoyed this course. ;)

The topics of the homeworks and the lectures were interesting and the fact that it is hard, even for experienced lecturers, to think clearly in front of an audience did not paralyze the whole class for entire lectures is really appreciated, particularly when compared to other courses where it happens.

The topic is fun. The lectures were great (except the logic lectures). No exam is a big plus. Fun homeworks. Fun quizzes.

the simplification of HW2 was really needed

Very interesting!

shouldve been 7.5hp

Video lectures!!! Also really liked the quiz examination, the quizzes were fun and the level of difficulty was perfect. Another thing I really appreciated was the fast feedback from the teaching team.

I liked the labs (homeworks) and the project the most. Patric's lectures were also nice. The guest lecture about Deep learning was awesome (keep that!). The ethics part was pretty interesting also.

-

The project is very usefull. Real software with real world application. Totally worth it!

Guest classes were amazing. Keep them coming.

That the knowledge was being converted to practical expertise.

The "softer" lecture about ethics was nice to explore something apart from pure CS and to generally open your mind and make you think about the topic from different perspective, although the essay was maybe a little "too much", I can't imagine anyone brought up something that hasn't been discussed over and over again before given the "easy" prompt and the limited space.

Simplified version of duckhunt made it easier to focus on the acutally using HMM.

I liked the fact that there was no exam and I do believe that the quizzes covered the most central parts of the course.

Interesting content and assignments. Well structured.

The homeworks were very good to get a deeper understanding of the material. The guest lectures were very interesting I would definitely recommend you keep that.

I like the lectures. The quizzes are a fast and efficient way of reflecting the concepts from the lectures.

The lecture on deep learning was extremely fascinating. All lectures with Patrik Jensfeldt were also at unusually high standard.

The content was interesting. I think it was a good attempt to use modern technology to organize things (moodle as a one-stop organizer).

Since there were apparently many problems with the project groups (not just mine but several people I talked to had similar experiences), I appreciate that this year you grade people individually based on contribution. This is only fair since some people are slackers despite this being a master course.

The lectures were very interesting and really helped me understand the subjects. The project gave a good understanding of NLP.

I appreciated the content of the course, since this is a whole new area of knowledge for us CS students. A lot of theoretical models were used and I liked the fact that there are different ways of handling AI, and got a broad understanding of the various algorithms used.

The content is very interesting, covers several fields of AI.

The fact that this course is project/homework oriented is also good

ethic lecture

Interesting Homework tasks. Tutorials are good.

Proper guidance to do a project.

really liked the first two labs,

I did really enjoy the course.

I like that there is some emphasis on practical parts, e.g. actually having to figure out how to design an AI.

Getting practical experience with constructing AIs and the quizzes.

1. Homework assignments were really interesting and challenging.
2. Kattis judgement process kept me motivated to think harder to score higher.
3. Exercise sessions helped understand the basics behind the algorithms.
4. I appreciate the immense effort put in by the lecturer and all the TAs.

The checkers AI! This was great and a dream coming true! The lectures were great and the quizzes helped me understand them!

I really liked the introductory lectures to deep learning, nlp etc that wasn't tested

The practical focus was very good and the topics very interesting.

One of the best practical courses at KTH! I really learnt useful things. So many other courses have professors that don't really care about real life applications of what they are teaching and the labs are also usually completely estranged from reality. I liked the labs in this course because they always seemed relevant to other practical problems.

Class lectures were very well organized and useful. HW topics were useful in our understanding of course material.

The theory is interesting and fun to implement.

Gives an introduction to everything

I think the labs were good overall.

Lots of practical implementation, which helped understand the concepts

105 have answered of 301 (34%)

Things you would like to see changed next year:

Text answers:

I would have wanted to learn a lot more about NLP from lectures. The guest lecture, while very interesting, was mostly about speech recognition and other higher level concepts that didn't really apply to the project. A lecture about grammars and n-grams would have been very valuable.

Also, please make it clear that Duck Hunt is in 2-player mode. I spent way too many hours trying to fix bugs where birds would mysteriously die without being shot.

Better feedback on HW1/2. Make it clearer what is needed for the grades on the project. You had posted what looked like a checklist but then said it was only guideless and made it very unclear what was needed for a specific grade.

Some of the TAs gave a rather irritated impression on the forums, as if we were annoying and stole their precious time. In general it felt like they thought we were all lazy and would try to cheat the system to do as little work as possible.

-

Project was very heavy and it was way too focused on being scientific. This felt almost like doing a bachelor thesis once again.

I'm quite sure our and a lot of other groups works are better than a lot of the bachelor thesises getting passed.

The quizzes, not sure how though.

For the next year, it probably would be better for the understanding of the HW2 if we had to implement the HMM per se, while having some extra days to do so.

-

I would reduce the quizzes to pertain only to subjects surrounding the assignments. Allow me to review my previous quiz attempts (they can be printed to pdf in any case). Replace planning, POMDP, and logic quizzes with quiz modules related to HMM tutorial sessions as this would have motivated me to go through the algorithms by hand several times.

The duck hunt lab was very hit or miss, and if there was better way to diagnose problems, besides just hoping that it is right on Kattis.

Nothing specific.

Nothing special

The information was lacking at times, especially about the project and the TAs did not seem to always agree with each other. So clearer information about what is expected from us would be nice.

If it is possible, let us put more concepts into practice! Just quizzes alone was not enough for me to really absorb the content from the lectures.

The help sessions (1), the homework (2) and the attitude of the TAs (3).

(1) The help session is for students to come and ask question, listen to others, work and reflect. This means that some might attend the class for inspiration and might need help later on, NOT that everybody are forced to have a question that they have to say in front of the hole class (although it might be specific). The TAs choose to leave the classroom if there were no questions, is that really right? Should we, as students, miss out 2 hours help just because we did not have a question right away? In my opinion, it is not right in any way.

(2) It was more about doing trix and changing small numbers in order to get high Kattis-score, not to program and learn, which I personally did not like.

(3) On the help sessions and on Moodle. (only on some TAs of course).

The project wasn't very helpful and there was very less time. More time should be provided in order to do something productive.

- remove the project, especially the examination
- do HW2 simpler, it is better to have more small labs where you know from the start what to do than have a big lab that you are most of the time stuck on so you don't learn so much during that time.

I would like to see more feedback from kattis and also a little bit clearer desription of what is required for each grade in the lab description, like it was with the project. One more thing was that when I tested my code for HW1 on my computer it didn't give a runtime error but kattis gave that. I think that kattis had a shorter deadline than the deadline provided in the skeleton.

The quizzes were too hard! I spent to much time on them in relation to what I learnt by the quizzes.

I think it really wasn't a good idea to give a project without letting the students choose the subject. I really hated being forced to work on NLP whereas AI is a vast field.

Perhaps some more NLP lectures/tutorials. I can see how a quick overview of different techniques and how they are applied can help a lot in project progress and creativity for project ideas.

The microphone didn't work during the Logic lecture which was unfortunate for everyone.

I think the course is good the way it is

A less bossy, less rude attitude from Akshaya.

I think that the labs took too much time. I estimate that about 50% of my time studying during period 1 (all courses included) was put into the AI labs.

I would recommend a more polite tone when communicating with students in the course. Maybe other students than those in my were rude towards you but I felt that my group got harsher comments than needed. However, it might also be that I perceived a harsher tone, in the project feedback, than you intended.

Less delay on the homework presentation.

Since I had problems with group members on the project I like the idea of doing something to demonstrate interest in the course before choosing groups.

More freedom to choose what to do for a project, maybe different homework assignment options for each topic (search & games; hmm)

The HW booking procedure could be improved, perhaps to have a booking deadline coincide with HW deadline. When we were looking into booking presentation for HW2 there were no slots left, even though we were booking well in advance before the final presentation dates. We would have appreciated a warning that presentation slots could run out. Eventually, I guess some other group cancelled their booking, which made it possible for us to get it. Don't know what we would have done otherwise.

Give us an optimal solution for the homeworks! I actually don't know what is the best solution to the problems, since I didn't get the A grade score

Some topics and lectures have very little value (Logic and representation of knowledge, Planning).

The only thing I can think of is to give incentives to go over the A score in the HW.

Even if you do the extra task and play around with the agents (which will result in more points) there is no sense going deeper (higher on the leader board)

If the persons in the top 10 at the deadline would get an instant A (no oral exam) it would bring possibly out better and better solution each year and if you reach top 10 an A is justified.

More clear structure for the project. Would be nice with better requirements for what's needed for a valid submission.

The way the project mates are chosen. Maybe it should be the professor in order to avoid people not working and relate different skills of the group members

Drop the ethics assignment. I highly doubt if anyone read my essay, not that I wrote something fantastic, but yeah, you know.

less useless contents

The workload for HW2 is too high. The help and guidance provided is not enough for students who do not originally study computer science.

The theme of the project is "we do not care about your coding skills" but during the HW2 this is a demanding part of the task. Another thing to do with this is that, it is my belief, that you either provide a fully working skeleton (for the HMM to be implemented) or you just don't provide one. On my part I spend one whole week of work (late nights) trying to develop the code without understanding why it wasn't working as it should, which was due to the skeleton of the HMM provided.

Regarding the project. Although I can understand that it is important to have courses in which scientific methodology is to be implemented, "the focus of the project is in what you can learn and not on your coding skills". I do not like that in a course that is presented as an AI implementation and theory course, one is forced to put a lot of time in doing a scientific report for a scientific study of the implementation that one does in this project. On my part as a mechatronics student, it was my understanding that the course would provide me an introduction and some knowledge about theory and implementation of AI,

which could come in favor of future works with robotics or software. Since I have already done courses which focus on research methodology I find it very bad for this to be implemented on this course when one is neither provided with enough time and guidance. The provided project report template does not follow the actual way a scientific report is supposed to be done, so why should we do it like one?

The last and maybe biggest problem is the structure, organisation and attitude which one encounters from the TA team. Structure and organisation wise, you are obviously not able to organise all 300+ students to be able to do everything in time and in a good matter, which could be expected due to the high number of participants. BUT what is not acceptable is that students are misstreated due to TA frustration when timeslots are not complied with. It is not the students fault. What annoyed me most during the course is that not only once and from different TAs (can't speak for all TAs, but more that two) had an attitude of prejudice against my level of knowledge in a subject I am supposed to learn now. I felt more than once that from the beginning it was expected from me that I should already know the subject we were about to learn and due to my questions and my presented results the TAs behave as if I was not a students working at the best of my capabilities in a subject which require another way of thinking than the one I am used to.

No quizzes

The project topic focus on NLP which is very good, but that is not the kind of project I expected to do in this class because I have already done some project in NLP class.

Replace the project with more homework, or really, anything. I could write a novel about how much I hate group assignments. And no, I'm not on the autism spectrum, and actually love collaborating in teams in real workplaces. In school however, it wastes so much time you could spend on actually learning stuff instead. In this course, the project took 50% of the time and 99% of the mental energy to learn 5% of the course material.

It does not prepare for working life, since group assignments are completely different beasts

There is no natural hierarchy, and although I'm all for flat organisations, it doesn't work with completely random people collaborating for just 4 weeks.

Those that are natural leaders will only get disillusioned (not talking about me here, but other people I've talked to have stated that they were actually discouraged at seeking a leading role after graduation due to bad experiences with group assignments)

This leads to 1 or maybe 2 persons doing all the work. Always.

It's unfair to those who are new in the school class. If you have read the bachelor in computer science, you already know which peers that are on the same level and you enjoy working with. If you come from another bachelor or are an exchange student, you will end up with a completely random group and get a completely random result.

...should I continue..?

A more structured way of grouping up for the HWs would be better. As a first year, I just grouped with whoever was around me at the time and this did more harm than good. My HW partner and I were at really different levels of both communication and programming skills. Maybe make the basic programming assignment mandatory again and publish the results (with the prog. lang. used) so the students can group up with a bit more knowledge.

While exciting, the HWs felt overpowering in terms of time required with respect to other courses in the same period. Being restricted to Kattis's languages, however minor, was a problem.

The project assignment was hard to understand at first. It's good for us to work autonomously but perhaps this could be improved by specifying requirements that will be assessed for all the projects.

- I personally find it hard to keep up with all the deadlines in all the courses if courses in themselves have different assignments running during the same time. A week in which 2 homeworks are due, 2 quizzes and in which you are expected to work on the project is a bit hard regarding that you have other courses at the same time.

I am not sure how to solve it and think it is also due to the short time of courses.

- I can understand the way that homeworks are graded through Kattis in a course of this size. But I still think that this leads to people optimizing the code for Kattis and not actually trying to improve the general algorithm.

Less content

A bit more fitting lecture to prepare for the project, the current NLP was interesting but had to less to do with the actual projects.

Credits points should be more than 6hp

I think more information about programming and Kattis is needed by students. Many questions that I had at the help sessions did not concern AI, but rather how Kattis works. In some cases, the kattis score was not consistent, so running the same code multiple times would produce different grades. Furthermore, it seems that the code will take more time to execute on Kattis when the server is busy, producing Timeout errors that did not occur when there was no high peak of usage.

In general, I found Kattis very useful to have a broad evaluation of my code, by in the end 1/4 of the time was spent in changing parameters in order to increase the score instead of focusing on AI.

please guide more on the project during lectures which is hard if we search everything on the internet without much knowledge and materials.

It's hard to contact professor and TA.

Considering the amount of time you had to devote to the course, I think it is worth more hp credits

The quizzes simply felt like a big time sink and did not add any comprehension of the subjects. The project is too big and there is not enough time and instructions to make it work properly. It is very hard to understand what is expected from us and during the work it feels like you might as well skip the course and read up on NLG on your own. Even if you do a great job and research everything the rapport an presentation is too short to show it. The project has to be made smaller of a bigger part of the course. HW2 is very hard to work on, even with good understanding of hmm's the application of this problem is very hard to grasp.

Better homework assignments. These were hard to connect to the theory, too much time spent on debugging, not fun, bad feedback since Kattis only says "no, try again". No information on what sort of Kattis scores we should expect for a certain implementation, i.e. adding features X,Y,Z should give a Kattis score of 15 or so. Kattis is just not the right tool for the job, especially compared to the way we had to explain our code. Better to have a pass/fail test of the implementation.

MAYBE, just (MAYBE) give us some more time on the homework assignments???? You put HW2 at the same time as the project. There was no way I could possibly do the requirements for high grade (meet the deadline) within the specified time limit, as I had 3 other courses at the same time! This doesn't mean that I don't want a high grade, it just means that I would have to stress myself to extremely high levels in order to get it done within the time. So please, give us more time.

I was a member of a good project group, they aimed for C even though all the other 4 members already knew they could not get a total grade higher than D, while I still had a chance at a B. Some members lost motivation because of this, but in the end most members still did their best to aim for a high grade for the project. If this was not the case, my grade would have been dependent on other members of the group and their willingness to still aim for a high grade. I feel this is unfair. I think my grade should reflect my effort and my knowledge, things that I have a control over. However, I do understand that you have made efforts to design the grading to lessen the unfairness in case you were unlucky with your group.

The lecture about logic felt unnecessary. Since most of the students have a background in Computer Science or Mathematics I felt like it was only a repetition of content I had covered in more than one lecture in bachelors.

Moreover, the lecture about Natural Language Processing was not at all helpful for the project. Even though the lecture was interesting, it would be nice to have a lecture which would be a bit more helpful for the project.

The kattis grading on the assignments needs to be completely rewritten, my solution for the second assignments gave me a score between 2 and 20 for the exact same code. The instructions for the project were completely horrible, one of the worst I've ever seen at KTH. By that I don't mean the instructions by themselves since they were quite clear, but we followed them exactly and got huge complains on our hand-ins in spite of this. Change the instructions or change the feedback, just make them match.

Everything can be a little clearer. Don't say that you can only receive E-D on the project when this is not true. By saying that it's an indication that the project is on E-D level is fine. It just felt as if it just created a lot of unnecessary stress and worrying (and questions for you).

Remove Duck Hunt. The c++ code has to be improved (too many bugs) and the score only depends on trying to optimise the parameters for the use case on kattis and most of the points are collected by guessing not by the actual assignment task: shooting ducks...

Better organization, clearer instructions, better feedback from assignments.

I would have actually liked the course if it wouldn't have been for a few aspects of it. I rarely write feedback after courses, but I felt I had to this time. There is a general feeling throughout the course that students aren't there to learn, but to be tested. This did not make me feel motivated at all.

(1) The instructions for the project were vague. For example, the A-instructions said "Do A, B and C", but when we asked the TA's about what we had to do, they said "these are just guidelines" and "do A, B, C, D and E". This is not okay. You have to be clear when it comes to grade instructions, and if someone follows the instructions they should get that grade (if it is implemented correctly of course). We got the grade we wanted, but still felt we were under very much stress because of bad instructions, not knowing what you thought was important.

(2) When asking for help at the help sessions, you got almost no help at all in the beginning and in the last session you got the help you needed (and some "secrets" revealed, like the number of iterations in HW2) when it was already too late.

(3) HW1 and HW2 are designed in a way to make students fail. Seriously. I absolutely understand the importance of implementing algorithms yourself, but the problem with these assignments were that you always had some tiny, stupid error in your code which gave you an F score on Kattis. I spent so, so many hours re-writing code and re-writing it again only to finally get an A-score on Kattis, not really knowing what I had done differently. What if I would have given up? Then my really bad score would not have reflected how well I knew the theory. You also said you didn't want people to tweak the code on Kattis for higher scores, but this is what everyone I spoke to did, not learning anything about AI. For example, values like the scoring of kings in HW1 proved to be the difference between C and A (?!?) -- how does this tell you about how well I know AI? Perhaps how well I know checkers, I would say. You should design assignments which do not rely too much on numbers or tiny details. Perhaps more assignments, but smaller -- reducing the risk of tiny errors. Or otherwise provide more hints or help. The assignments themselves were not too difficult, that's not what I'm saying. They are just ineffective, where an insane amount of time is spent on error checking which I would have rather spent on learning more AI techniques than Minimax and HMM's.

In the end I feel I got the grade I deserved. However, I also feel that I could have learned twice as much about AI in half the amount of time. Please think about this when designing the course.

Give more time and/or credits for the course. Preferably spread it out over two periods instead of one. Revise HW2 - it was not a good way to learn about HMMs. It was too much to have to do HW2, HW3 and the project simultaneously, they need to be spread out more. I spent well over 100 h on the project alone, more time would have been needed for it. The course was theoretically quite simple, but I had to put a lot of work in it anyway.

No project or either write report or oral presentation

more instruction

Less syntax. The course has too few credits to go in too deep into it. The material presented by Johannes Stork just felt too overwhelming and the quizzes seemed too hard. He is unfortunately not a very good lecturer.

There is also too many deadlines in the course, it is hard to study the material on your own if there is a constant assignment/quiz you need to turn in. I think I read somewhere in the course book that it is ment to be used for an entire semester (and not just for a 6 hp course).

I liked everything except the project. The project was probably one of the worst experiences I've had at KTH, which is a shame considering how much enjoyed everything else. Reading the course analysis from last year, I think "Make requirements for the projects more clear" was definitely not accomplished.

The project topics turned out to be useless, even the A-grade topics that were clearly specified could turn out to give a D-E even if you did several of them in one project. I understand that these were examples and not checklists, but if you have an A-grade topic that says "Do X, Y and Z" and you do X, Y, Z, Q and W and you still receive a D, without any feedback, it does make the entire experience frustrating.

To get back to the constructive feedback on the project: Be more clear on the project feedback. Looking at the grading criteria, we have no idea why we got a D instead of an A at the project. It makes it seem like the entire project grading was arbitrary, based on the feel of the presentation., with no regards to the grading criteria or the given project topics.

Other random complaints: Having to attach picture of each group member to the project report felt very weird and out of place. Even after hearing the justification, I don't understand how it's relevant.

Project presentations were also a mess. Changing the presentation times from 30 minutes to 20 minutes silently days before the presentation is not really fair. Especially if it means you'll try to fit groups exactly after each other with no extra time in between. Again, I understand that there's a lot of students, but if you want to keep doing this, you should have mentioned the 20 minutes from the start and made people aware that you only get a minute to set up.

I think that the workload was too high for a 6hp credits course. Less, more focused assignments I think would be beneficial.

Communication and grading. Right now I still haven't received my final grade, or my grade on HW3, or a clearer project grade than VG, or a grade on the quizzes.

Moodle was good at times, like for the quizzes and booking lab times, but I don't get why different classes have their own Moodle instances running, when the system is clearly built for having multiple classes in one instance of Moodle. Having a discussion forum there is a bad idea, all it really does is create confusion about if we should ask questions there or on KTH Social. I would prefer if it was just KTH Social. The group managing system was awful, it was nearly impossible to even find who was in my group.

The HW2 code skeleton needs clearer disclaimers about that it does not work out of the box with flatland. I understand why, but it's a bad introduction to an otherwise fun lab.

Oh, and deadlines at 23:55 is a bad idea, please do 23:59, which is what everyone assumes that it is, and you will get fewer emails.

HMMs was a hard concept to grasp. It's great that you made it into a lab exercise, but I still feel it required too much self-study to understand the concept (and I feel that I wasn't helped much by the lectures or ovning either). So maybe assign more time to HW2.

The Help Sessions can be better organized. The students should be encouraged to share their doubts with everyone, so that some discussions emerge.

There should be some kind of normalization between TA's for the homework presentations: some asked very specific and high level questions about the topic of the homeworks while others just asked to be guided through the code for the same grade, which is quite unfair for students who happen to lose at the TA lottery.

Lots of random elements to the Kattis score (same code could get different score). Not very good when our grades depend on this.

Do not have two versions of Duck Hunt. We started with normal (not flatlands) Duck Hunt but could not finish it at B level in time (We got to 180) for the deadline. We realised that as we received B on HW1, we could not get any grade higher than C so it didn't matter if we did Flatlands (and got D) or Normal (and got C). We scrapped a lot of code to get it to work and Flatlands and got like 20 points pretty fast. We did more advanced stuff in our non-Flatland version but for naught.

As mentioned earlier, one week was too intense (project, two homeworks and three quizzes), try to spread it out more.

I think hw2 should be reworked a little.

I think that the storks were too randomly good/bad.

The problem is that you can get a really high score by just missing them by luck and this makes it hard to check if you did something good or bad in your code.

One idea is to have more storks but they give you a smaller penalty. Then you would want to really detect storks.

The test sets should be larger as well in my opinion.

It was hard to come up with a project. Since we are noobs, we didn't know what would be considered a good project. I would like to see a guide of "how to come up with a project" rather than examples. The examples also made my group members "insnöade" on implementing n-gram models because the examples made the project look like it had only to do with that.

I felt that the help sessions were distributed weirdly. There were a few of them that were just too early for us to have come up with any code.

Make sure the c++ code follows c++ standards or at least be consistent over the 2 different labs. Have explicit copy constructors where appropriate (hmm class im looking at you)

Better information about getting login credentials for the portal. There was so much confusion about if and when you should receive that information.

The project administration on the portal, first of all you should be able to see the people in the group you are joining. Also, you should not need a tutorial in order to find the contact details to the other people in the group on the portal. Overall the project felt a bit disorganized, many details were unclear and I believe other students felt so too when looking at the discussion forum.

It feels like the core of the course were related to the homeworks (checkers, duck hunt and project). Maybe emphasize this a bit more throughout the course. Games and hill climbing, HMMs and N-gram models seem to be the core ideas. The rest felt a bit peripheral, and I am not sure about its relevance. I guess the rest are concepts which are needed for follow-up courses.

-

Kattis helping students to overcome problems instead of we spending day and night to haphazardly try out implement things. Same concept works for some and doesn't help for others. There should be techniques to test the concepts along with the coding of the programs.

HW1 and HW2 sounded really interesting, but turned out too soon to be pure dealing with Kattis, Coding, Debugging, etc. When doing the assignments, the first 10%, where you think on an abstract level about how to solve the problems, were the most useful parts and I can definitely see how that was useful to understand the topics better. But the remaining 90% where you implement and debug your ideas weren't helpful at all to get a better understanding of AI (but maybe for software engineering in general).

The project needs to have clearer instructions. It felt unclear if the project report was supposed to be scientific or go into details of our implementations, the instructions seemed to pull in both ways. It was very difficult to keep within the 12 page limit and still make the report scientific. Our first draft was 16 pages so we had to spend almost a day removing perfectly good chapters and discussion topics simply because there was no room in the report.

Please, *please* stop with the whole "if you hand in this assignment and spell the word "group" with a capital G, we will not consider this a submission."-thing. It's so unbelievably dumb. If you have a centralized submission platform, then shouldn't the name of the file be irrelevant? It just causes stress and confusion for the students who spend weeks afterward worrying whether or not their submission actually even counted. Fix this.

Bigger rooms for the exercise sessions.

The grade from the labs are too heavily dependent on the score from Kattis. Gaining a higher score on Kattis did not make me feel more knowledgeable about the problem. There were many cases where we got a higher Kattis scoring for changes that should in practice negatively affect performance. For example, in HW1 we gained a very good scoring (24) with random heuristics.

Since the teaching of the nitty gritty is sparse you need way more help sessions. I disagree that people showing up regularly is a problem. It's a good thing to have a regular meeting occasion for coding and exchange of ideas.

Get rid of the ethics essay. I have experienced 2-3 ethics assignments at KTH already and they all start with the "student holding lever controlling a runaway train" example together with some articles, then yet another essay. If you want a real ethical discussion, invite some interesting people to hold seminars and create a boiling pot of critical, intellectual discourse.

There are two things that I really would love to see change for next year. 1) The TAs behaviour and respect towards students and 2) the level of workload and weird expectations on students.

1) First of all, as I have seen through the discussion forum, the TAs have an extremely rude approach towards students and we get the feeling that we are looked down on (even when we ask basic questions like instructions and grading criteria). The instructions have been the worst kind that I have ever seen in any course I have taken at KTH which I am extremely disappointed when it comes to a course with such interesting topics. The TAs have acted very unprofessional and unfair towards students where they have not stimulated learning but rather bullied us in learning. For the sake of the quality of the Computer Science program, please remove the TAs and have people who are nice and helpful rather than rude and nonstimulating once that get angry when you do something a little "wrong" as a student.

2) It is very non-realistic to have deadlines for quizzes, homework AND a project close in to each other making it a simultaneous workload of three different working areas in ONE course. That is in my opinion crazy and some improvements of this has to be made. Also, CLEARER GUIDELINES! There were no strict criteria for the project at all nor for the homeworks. Why should the teachers' subjective opinions be of a matter of question of ones project? There should be clear criteria that the student can reach and argue for if the student feels that he/she has met them. In this case there was no such fundamental basis for the students making it extremely biased in grading for the teachers. This I am very unhappy about.

More NLP lectures, more focus on NLP techniques as it was the main part of the project

I also liked the lectures about Planning and POMDP but as I didn't apply them on homework assignment, it is still too theoretical to me.

logic and planing lectures

Late homework presentation slots can be announced earlier for better planning. We can consider as a person's contribution in the overall project instead of implementation phase alone. Other tasks like literature review, hypothetical experimentation and the result , documentations like report making, MS2 have also taken a considerable amount of time and needs NLP knowledge too for a successful project.

think there was a little to much focus on the project and I felt I would rather replace it with two more labs where one is NLP and one something more from the course content maby CSP:s. I would like to learn more AI and less project

planning/reporting. I know that's also valuable but c'mon this course is 6hp :P

For HW2, I struggled a long time to get my agent to achieve a score of 220 only to realize that you get a lot more points on kattis. There should be some information regarding this in the instructions.

For the Project. I know that you are very afraid that if you simply put a pass/fail on the project that no group will do more than "enough". This is probably a very valid concern, but to restrict the grade of one person on the performance of his peers is just wrong. Maybe you could change it up so that a better group grade can give bonus points for the HW instead.

A couple of things. There was not enough support for the homeworks/labs/whatever. It appears as if you were not ready for the amount of students, and that your attitude towards this was to be extra harsh. The assistants were not only rude, but gave out false information such as "You cannot get any grade higher than X since you have not followed our feedback" -- when in reality we had not received any feedback whatsoever, AND could actually get a grade higher than X.

More information about how the testing would be done. Completing the labs with high scores required a lot of trial and error.

Topics like MDP and POMDP should be given more emphasis.

Quiz should contain more solving type questions.

Stop saying HMM is difficult every damn lecture. Neither of my friends found it difficult but you keep reminding us that it is although it ISN'T. And there is no need for 3 lectures, one quiz and two exercise sessions on this, one of each would have been sufficient. Instead, we need more help preparing for the project. Gives us another lecture covering more material about NLP.

The projects had very unclear instructions.

My group didn't really figure out what to do and how to do it until Monday the week we should submit and still we got a VG for something we were unsure if we would even get G for.

The worst thing about this course is the organisation of the project and its ambiguous grading scheme. We definitely thought we would receive a higher grade by following the guidelines and at the presentation we received feedback (note: it was very constructive and useful) that should've been more explicitly explained in the grading scheme.

So perhaps re-evaluate how the project is set up. Right now it's a bit messy. It's difficult to know if one's project topic is enough for higher grades.

If feasible it would be much more awesome to do a project on Deep Learning!

More emphasis on theoretical aspects. Less work load, considering this is a 6hp course, I spent much more time than I should have.

More sane project report. The current structure, where both the abstract + reference page is included in the total page number is just stupid.

Increase number of tutorials, lessen topics (logic and planning).

Pretty much the entire logic/metamath lecture was in my opinion wasted (Background: studied engineering physics @ KTH) and brought interesting concepts that could have been presented in 15 minutes.

Change TA

The Kattis score on the labs were pretty random. You could get very varied results by just changing the random seed.

It would have been nice with some kind of lecture after each lab where you get to know how to get a good solution. Now you tried the best at the labs but didn't really could know how to get a better score. I know this is tricky because the labs look the same over the years, but it would be a good addition to the course.

Timelines were harsh, keeping in mind that AI is not the ONLY course to complete

101 have answered of 301 (33%)

Include any overall comments for improving the course.

Text answers:

Interesting content but the structure of the course was horrible, the quizzes were rather annoying as the difficulty was heavily varied, some 1h quizzes took 3 minutes to do and some took 30+ minutes. While I somewhat felt the TAs wanted to help us, their behaviour felt counterproductive for this and it did not feel as any feedback would be well received. Last I checked the feedback forum was empty although more or less everyone I know had complaints about the course.

Make the project smaller, it was way too big for the credits.

None

I think it would help to get a better in-depth understanding of more topics if there was one or two extra homeworks, maybe making each one simpler for them to fit the time constraints of the course.

-

Some work could be done on the labs, but overall it is a good class. Maybe some better way to diagnose code problems as well.

Maybe better TA on the Övningar?

I understand that I am no expert on leading a course. Perhaps the way the course is planned out is the most effective way to provide content and then it is our task to do what is necessary (in our free time) to really absorb it, such as applying it in some practical way. But since the lab assignments we DID get were so good I naturally wish to request more of that. Lectures were great and the project was a good way to try to create something unique and really challenge ourselves. But I personally felt too immature to do a project to that extent and feel that I did not meet the requirements as well as I wanted to here.

All in all, I enjoyed the course very much and hope that more students do!

Don't focus on Kattis-score, and try to help students, not refuse to do your job.

Tutorials for homeworks need to provided a bit early. That would have helped a lot.

Not much really, this one of the best courses I have read. I did read the course analysis from the previous year and must say you have done a great job in improving the course, or rather: I didn't experience anything negative that was stated there, but the opposite.

Focus on homeworks and the actual implementation Of AI should be Slightly bigger

The project sucked; we had one lecture in NLP and very short time to both do software + report. Do software, and pick a better topic.

Maybe a pass/fail test on basic concepts would be better than quizzes but I'm not sure.

-

Simply making the project less constrained to a topic (NLP).

I feel like I improved my programming skills but not really got a deep understanding of AI. I would appreciate more focus on theoretical stuff.

Keep up the good work

I don't know where I should write this to reach to appropriate teachers or instances so I'll write it here. Even though the course was exciting and interesting I found some parts terrible and even offensive. One of the worst experiences I've had on KTH is from this course when teacher and assistants laugh at us students for asking questions. Not only was I and other student friends laughed at (not as a group, but at our individual questions), I was laughed at in front of the whole class in a large lecture room for having a "stupid" question (I guess). This didn't motivate me to continue studying harder and get better result, in fact it made me just want to finish the course as fast as possible.

I don't know the teaching philosophy behind the course but it is find it deeply disturbing that this happens on KTH and it doesn't promote learning and experimenting. It does the exact opposite.

more on programming and application

Comments on questions in the form:

About Moodle, I did not use it much for informative purposes so I can not have an opinion of it.

About the coding alone or not question. Since we worked in pairs I did not write all our code, we shared the writing and discussed all the code with each other. This question should be rewritten to reflect the pair and how the pair of students worked. This is how I now interpreted 'I' as 'we' in the question.

For the "Which way do you prefer most to get information AND help about different aspects of the course?"

I prefer different medias for getting informaion and help. Help by asking at tutorials or lectures. Getting information I like on Social.

N/A.

we are here to learn not to compete so make the home works for learning not grade competition. When asking a specific question getting answers like no I cant answer that b/c it is a Lab question is shameful.

Overall course is good but, took

Regarding homework assignments, I believe the difficulty really increases when working alone. It would be nice to have the same facility provided for the Project groups, in order to easily find partners for the assignments as well. When choosing a partner, or a project group, it would be nice to see a list of preferred programming languages by people who are already in the group. I find myself more comfortable with Java programming, so I'd tend to avoid working in other languages when deadlines are strict, as I have more control over the quality of my code. When forming groups or pairs, knowing which programming language are preferred by a group would be really useful.

The forum and discussion page on social are not enough. Not efficient to receive reply.

As specified above on the assignments.

The course material and coverage is good, it is the administrative parts that are lacking which makes what could be a great course barely OK.

I do not know what kind of instructions the TA:s have. But I felt that some TA:s thought that they could give us no help and that their main focus was on confusing and make us question our solutions even though it was correct.

The lecture slides should be more elaborating and the pace of the lecture should be balanced considering students with different levels of understanding.

it is a good course. patric give a very good lectures

Please take the course evaluations given this year into deep consideration. I know there's been a lot of students this year and it's hard to please everyone, but from what I've heard, pretty much everyone has had a very negative experience with the project. Figure out a way to address the issues brought up here that works with the TAs you have.

In addition, I think the grading should be revised. It sucks to go from an A in both labs and receive D as a final grade because

the project was (seemingly arbitrarily) graded as D-E.

Some of the communication (both on the forum and on assignment comments) felt a bit unprofessional, in that it was harsh and/or dismissive. This was possibly justified but feels unprofessional.

Clearer communication between students and teachers please. It was difficult to find all information and deadlines etc.

-

The course provides a good understanding of the concept. Let it be increased to 7.5 credits to not let the students feel the immense consumption of time.

If possible, commit to the deadlines given / give more generous deadlines in the first place for the project. Of course extending a deadline is not bad, but if you work hard and prioritize the project because you think the deadline is coming soon, only to find out one day before it, that you have one more week, it would maybe be possible to schedule the time more efficiently, especially if you have to manage four people to meet.

The fact that the project plays such a huge role on your final grade, made it feel like a waste of time to try to get above C on the homework assignments. The project could have just as easily been a two man homework.

The homework extra task for any grade above C is a bit weird. Me and my partner had enough score for B on HW1 and discussed during the presentation about different methods we tried. But because we didn't write it down, it ultimately didn't matter.

Overall I think the course was fun and I learnt a lot about what AI really is and how it is implemented. The guest lecture about Deep Learning was one of the most interesting lectures for me.

The course is the best I ever took, so please don't change anything.

All in all, the course content was very good but the course structure was shit. A lot of limitations of once capability came because of the bad course structure.

Flexibility in deadline for HW tasks and Project needs to be considered but keeping their demand of knowledge in solving challenging tasks as same.

Try to give abit more time for the project. Just starting it up a few weeks earlier would have been sufficient.

I feel like the övn sessions were waaaay overcrowded

More Deep Learning!

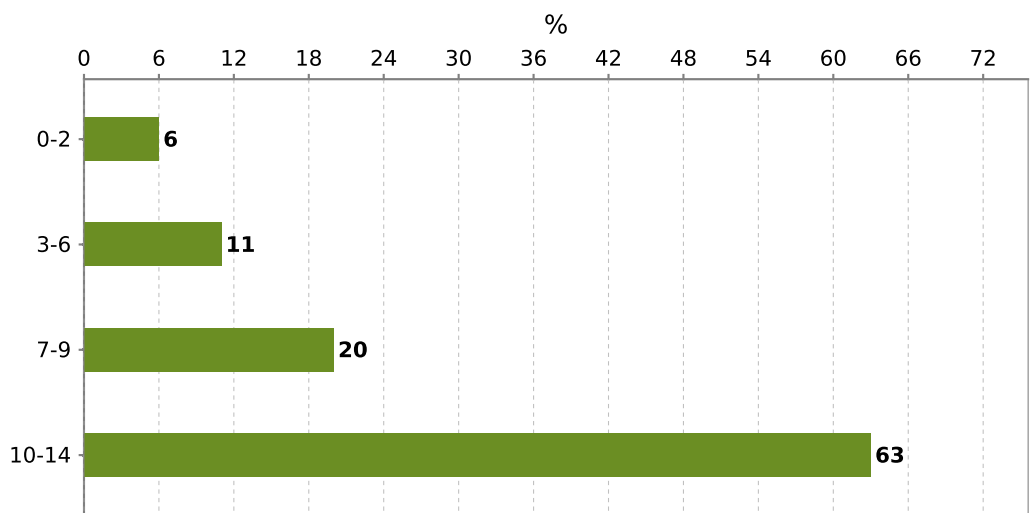
I felt the last few lectures were poorly organized when compared to initial phase, we were juggling between different topics.

Same as above.

Just be a little flexible with course timelines. Content wise it's good but some basic knowledge in the classroom before each topic should be given

48 have answered of 301 (15%)

How many lectures did you attend? There were 14 Lectures.



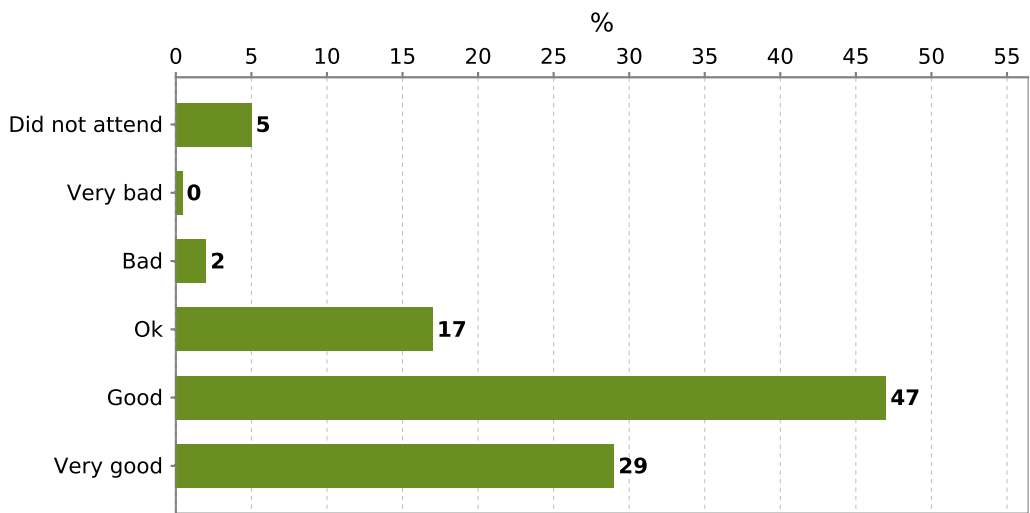
Number	Distribution	Answer choice
11	6,2%	0-2
20	11,2%	3-6
35	19,7%	7-9
112	62,9%	10-14

Average (for numeric answers): 8,01

178 have answered of 301 (59%)

Maximum number of choices: 1

What do you think overall about the lectures?



Number	Distribution	Answer choice
9	5,1%	Did not attend
0	0%	Very bad
3	1,7%	Bad
31	17,4%	Ok
83	46,6%	Good
52	29,2%	Very good

178 have answered of 301 (59%)

Maximum number of choices: 1

Respondents comments:

Most topics were interesting.

Good teacher!

But they had to little space

Good amount of lectures and content

Great lectures!

Good information and teacher.

The lectures were simply an overview of a variety of topics. But I guess that's how the course is structured. Theory with more depth would be appreciated.

Could have been more related to the assignments.

Too much people in the same classroom. Sometimes it has hard to get a seat.

Although I didn't attend as many as I'd like, I very much enjoyed the ones I did attend. The HMM lecture in particular was very good. It was noticeable how much Patric encouraged everyone to understand. The lecture notes from Patric are very good as well.

Mostly studied on My own or with friends

Many slides included questions that were only answered verbally, making them useless online.

-

Not specific for this course but a general observation is that the headsets seem to work very rarely.

Guest lectures are a very good idea.

Patric: Very good structured and concentrated around the most important points

Guests: Very interesting give a nice view of what is out there and makes me wane hear more about it.

Johannes: Please make sure the microphone works and the content was not as clear structured as in Patrics case.

The real (not video lectures) were very good. Patric was a very good lecturer.

Patric's lectures were very good to brilliant

The lecture and video lecture by Johannes very very bad to terrible (the same goes for the quizzes on his topics)

just another lecture

Many were quite late which was quite troublesome for me.

To the point attitude during the lectures was great. Live demos of things working was even better.

Some were ok some were very bad.

The lectures were useful as a first introduction to the topic, to get the forma mentis and formality proper of the subject. I was really interesting to see showcases of real projects done by Patric. Lectures have been really inspiring, and useful to understand what problems are relevant to AI and what is the state of the art.

I understand that two hours might not be enough to cover the topics in more detail, and I'm happy with how homework

assignments integrated with that.

I expected the lecture on NLP to be more related to n-gram models and how are they used, as a kickstart for the Project. The lecture give was really interesting anyway, as it showed what research is being made on speech analysis. However, it was not very useful for the project,

recapitulation are good if you miss a lecture

The first ones were good, after hmm's the quality seemed to drop off.

To small classrooms for the amount of people attended

Jensfelt is boss

I preferred the normal lectures to the guest the lectures. Sometimes I felt like they did not fit very smoothly into the course plan.

The majority of the lectures were too crowded.

I would have wanted to attend more of the lectures, but due to the homeworks / project taking up to much time, I had to skip most of them.

cover all the important part

Lectures were very nice overall. Good pace and interesting content. I enjoyed it.

I don't learn much from lectures in general, but I feel they were intresting and that the lecturer are experienced and knows how to make the material intresting.

I see you're asking about the Deep learning guest lecture: I think it was REALLY intresting, but it wasn't "useful" in this course in any way.

The best ones were the ones where we saw current research at KTH. It was inspiring. The NLP lecture was good but didn't help us at all in the project.

Patric's lectures were good. Sadly I could barely hear/understand anything on Johannes's lecture.

-

When I mean very good, I mean VERY GOOD!

I enjoyed Patric's lectures the most. The guest lecture in Deep Learning was also very interesting. The guest lecture about NLP was mostly about speech recognition which didn't feel relevant for the project. Perhaps it would be possible to focus a bit more on the project specific parts of NLP so the students are prepared for what they are about to do in the project.

The lecture about Logic and Representation of Knowledge and its Quiz were weird compared to the other lectures and quizzes.

In Patrics lectures no matter how difficult the material was one could at least get an idea about what to study to get a better understanding of the material.

But in this lecture about Logic it was more anoying as we weren't able to understand what the TA said and when we moved into another row we didn't get much more because the microphones still didn't work. No offense, but compared to Patrics high quality lectures this was not a good one and doing the quiz was very anoying.

The lectures were very good, which is very rare at KTH.

Not sure what to say about the lectures. As a summary of the content in the book it was ok, but somehow I would have liked more MIT style lectures which focus on really understanding key points about the algorithms. See MIT OCW "Artificial intelligence" for inspiration.

As for the video lecture question below: I would like to have video versions of lectures, if they are good. Otherwise not.

The lectures were very interesting and really helped me understand the subjects.

However, due to high workload I did not have time to attend all the lectures.

Patric Jensfelt was really interesting to listen to during the lectures!

Like mentioned before, the reason you went to the lectures were to pass the quizzes. I did not actually learn much from the actual lectures other than remembering a few keywords.

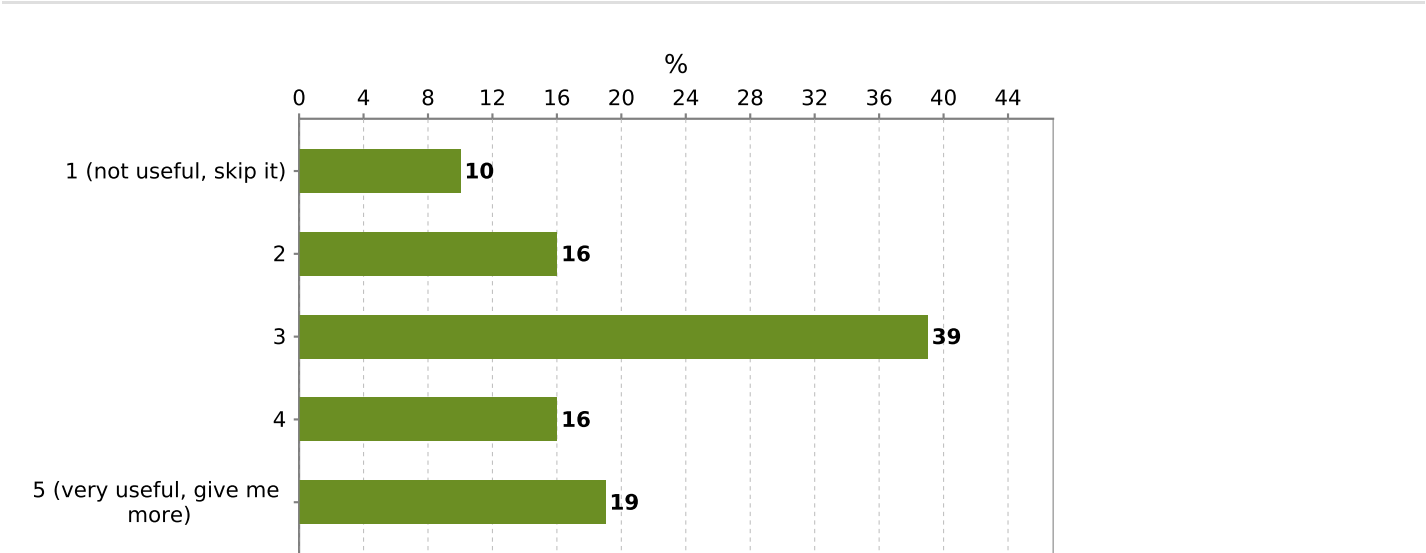
Really good! I am seldom a fan of the lectures but you have a way of keeping up interest and teaching and the same time. I admire you for this skill!

Patric's lectures were by far the best. They were basic enough to get a good introduction to each subject. Johannes was a bit slow and too methodical. However, watching his video lecture in retrospect really helped.

Would also have loved a more in depth lecture on deep learning. Like maybe show us some code or algorithms.

I said OK but same of them were very good and others very bad.

How useful was the guest lecture on Deep Nets?

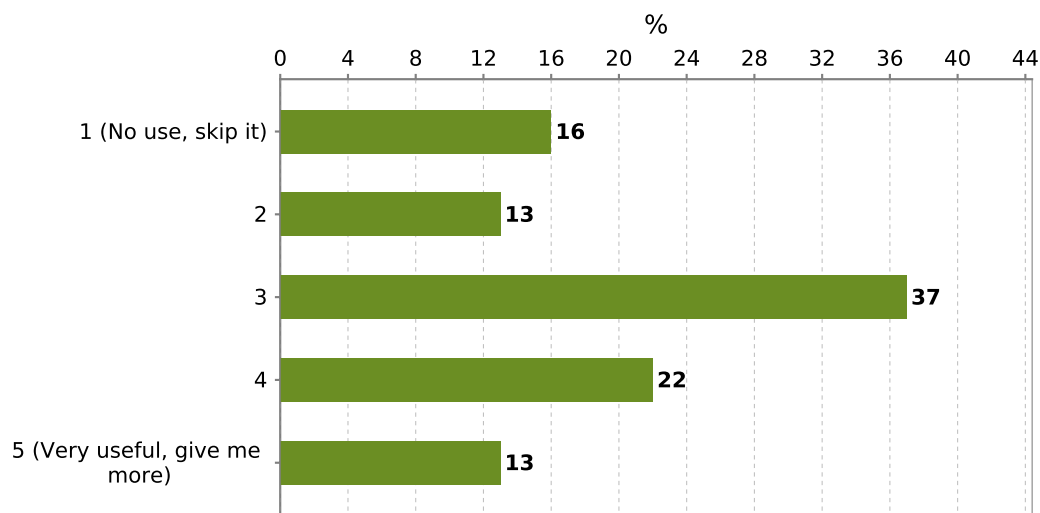


Number	Distribution	Answer choice
17	10,3%	1 (not useful, skip it)
26	15,8%	2
64	38,8%	3
27	16,4%	4
31	18,8%	5 (very useful, give me more)

Average (for numeric answers): 3,18

165 have answered of 301 (54%)
Maximum number of choices: 1

How useful was the guest lecture on NLP?



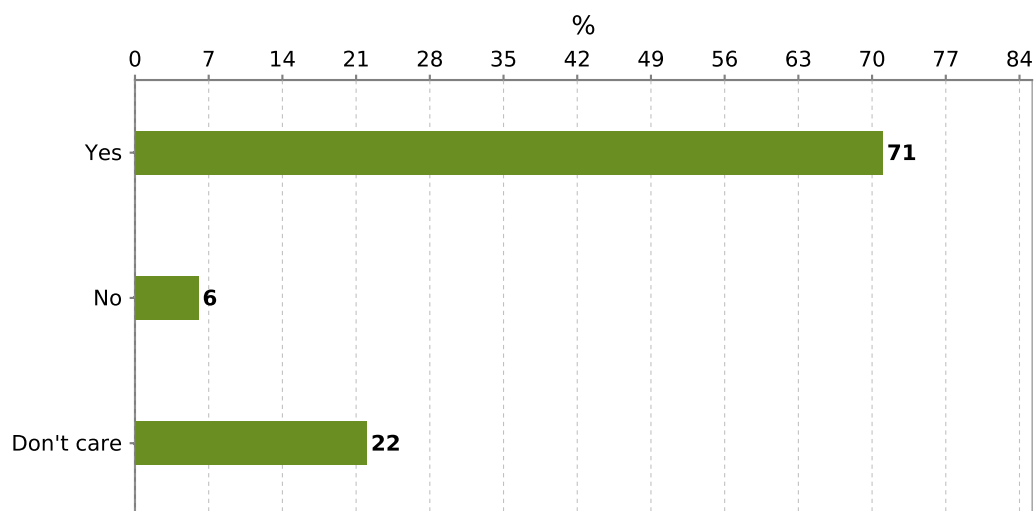
Number	Distribution	Answer choice
26	15,6%	1 (No use, skip it)
21	12,6%	2
62	37,1%	3
36	21,6%	4
22	13,2%	5 (Very useful, give me more)

Average (for numeric answers): 3,04

167 have answered of 301 (55%)

Maximum number of choices: 1

Would you want video versions of all the classroom lectures to be available?

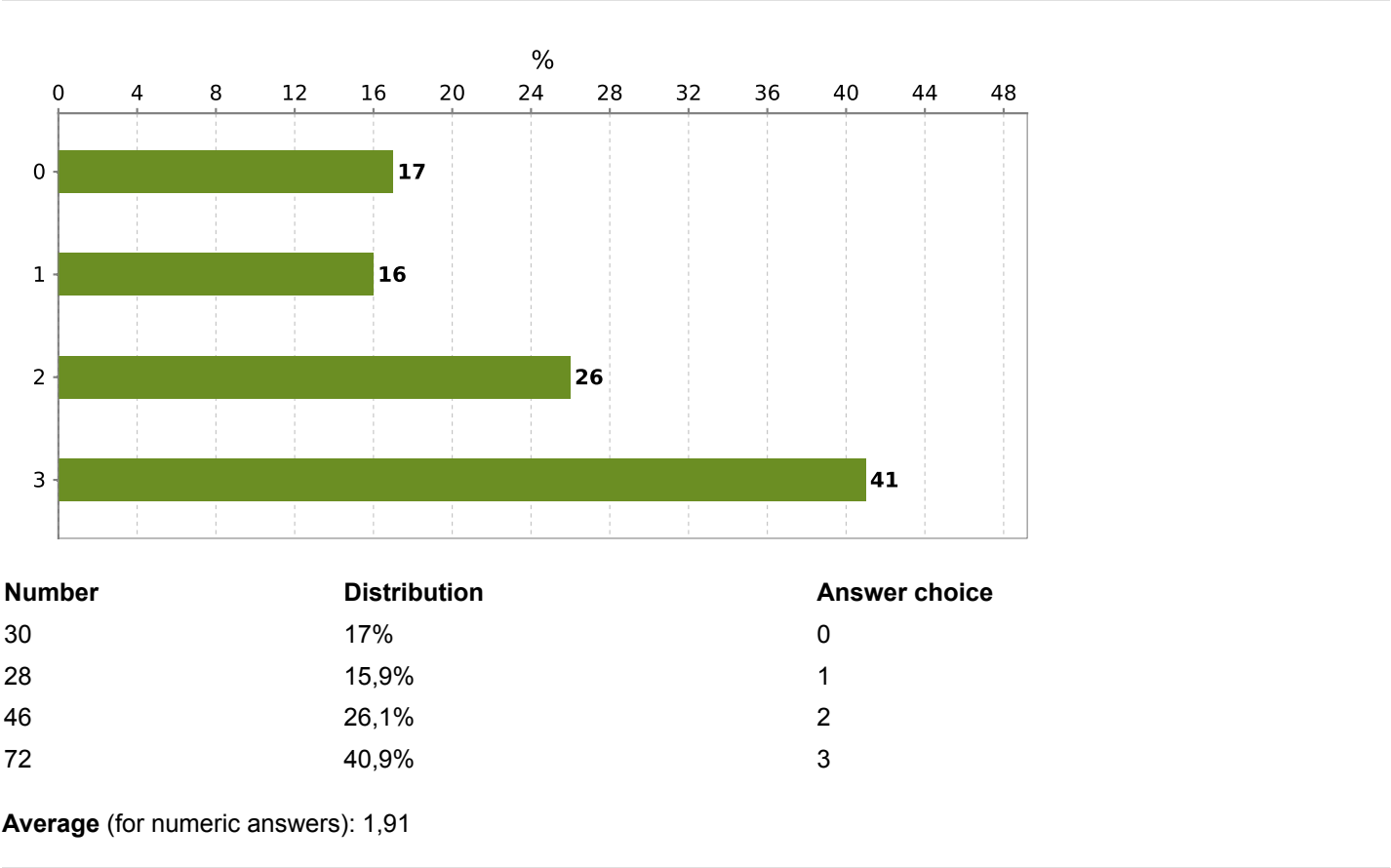


Number	Distribution	Answer choice
125	71,4%	Yes
11	6,3%	No
39	22,3%	Don't care

175 have answered of 301 (58%)

Maximum number of choices: 1

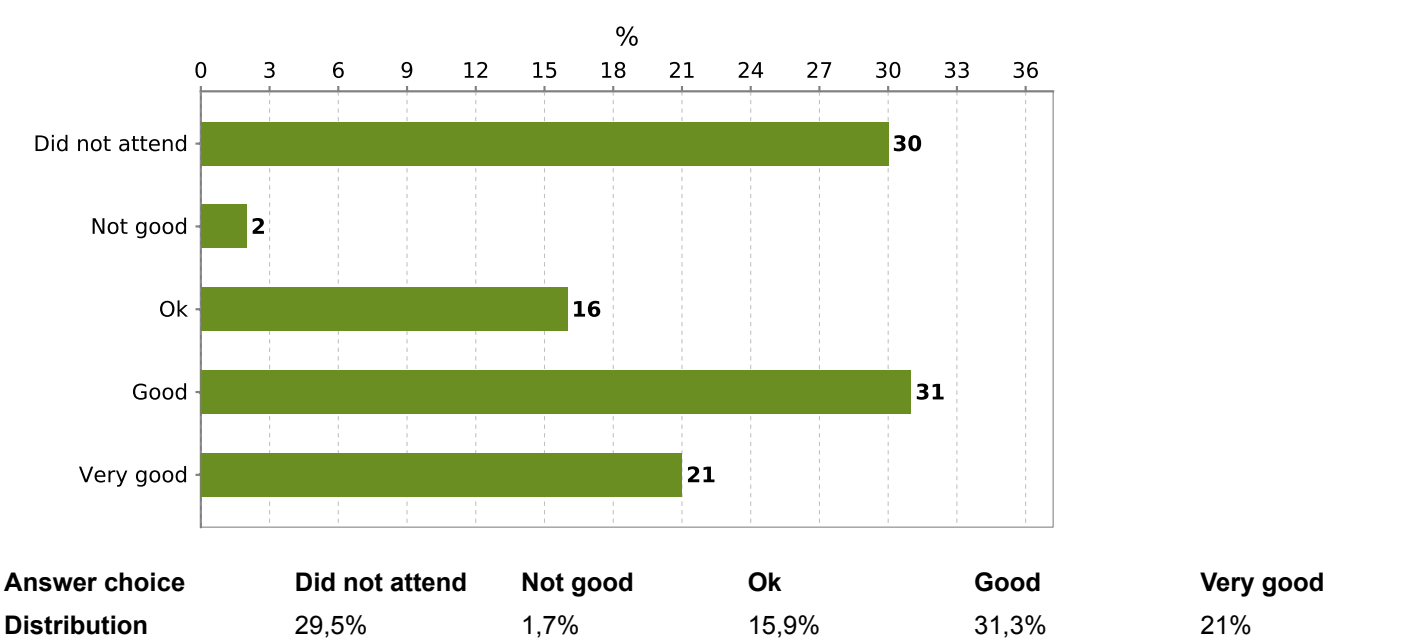
How many Tutorials did you attend? There were 3: Games, HMM1, HMM2.



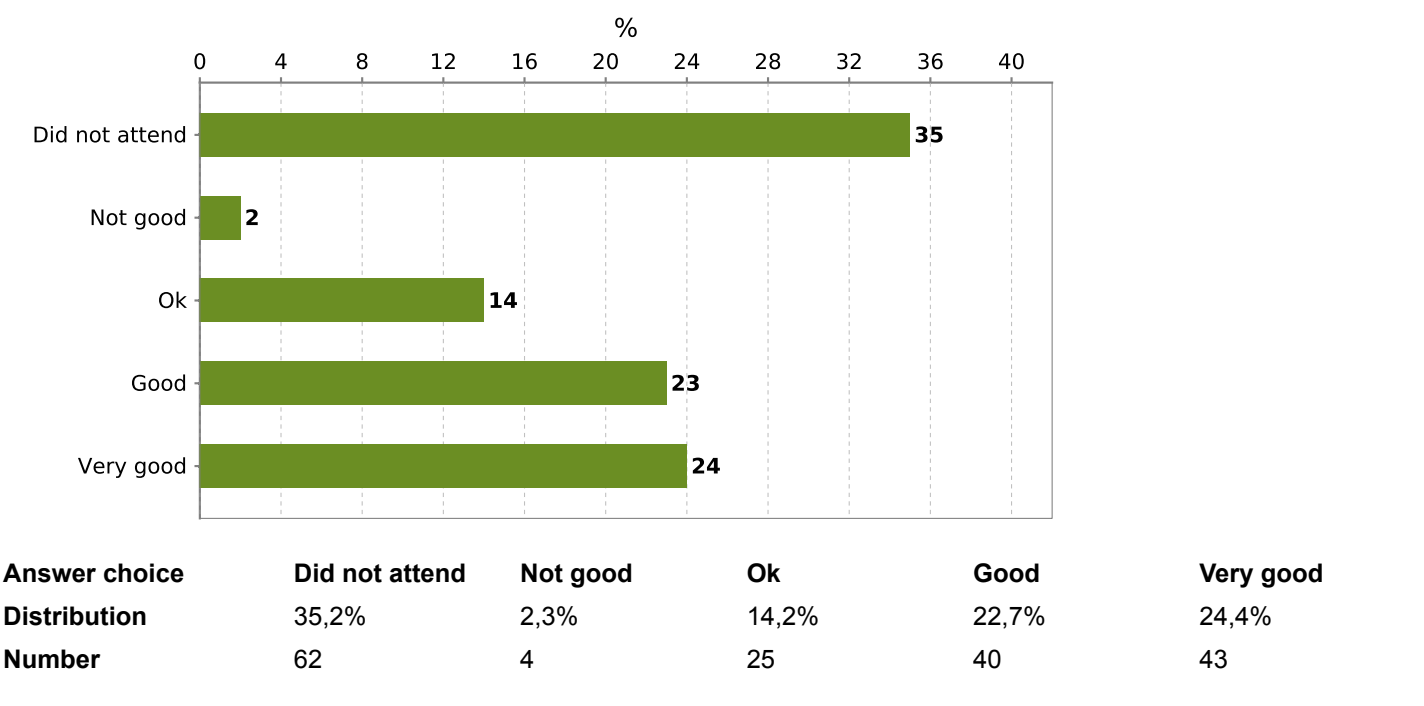
176 have answered of 301 (58%)
Maximum number of choices: 1

How would you rate each tutorial session? Please provide a rating for each row below.

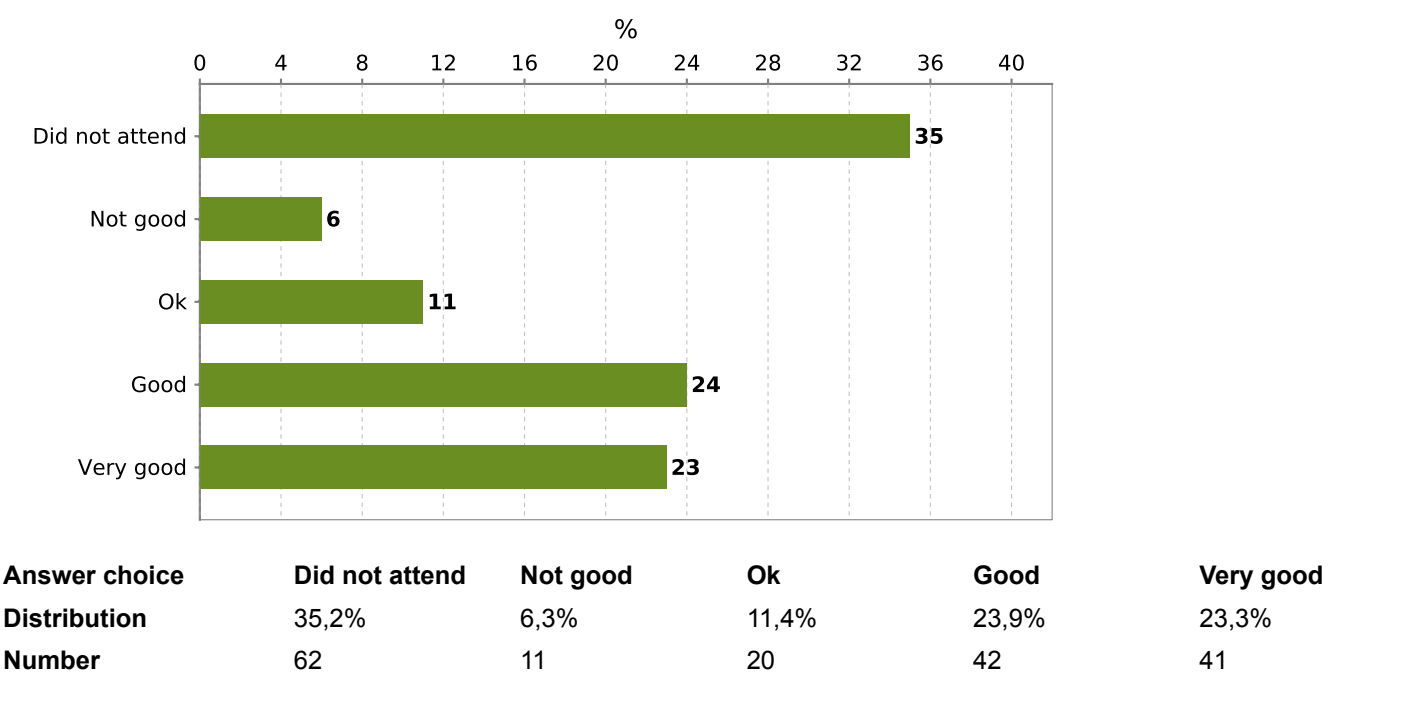
Tutorial 1: Search and Games



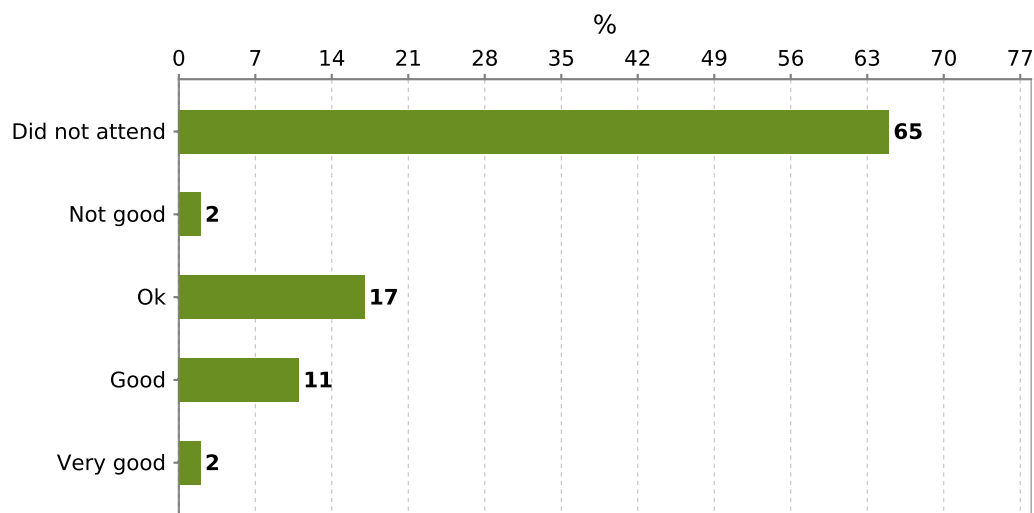
Tutorial 2: HMM 1



Tutorial 3: HMM 2



Tutorial 4: Video Tutorials on Programming, GIT, Kattis etc.



Answer choice	Did not attend	Not good	Ok	Good	Very good
Distribution	65,3%	2,3%	17%	11,4%	1,7%
Number	115	4	30	20	3

176 have answered of 301 (58%)

Maximum number of choices: 1

Respondents comments:

I'm confused, I don't quite understand what you refer to with tutorials 1-3, were those lectures, "övning" or help sessions??

Didnt know there were tutorials.

Akshaya's tutorial's were excellent.

The assignments in the tutorial was to difficult. It would have been good to repeat the concept and have some small examples and some explaining text on the handouts.

I couldn't attend the first tutorial although I wished to, but the other two were really good. Especially HMM2 with Akshaya was very intersting and fun!

Fantastic tutorials, enjoyed the interaction between the student and the teachers.

I went to Akshayas session, which was full of stress and 40 min overtime. Wth?

It was unfortunate that the 2nd tutorial on HMMs didn't really get finished.

I learned a lot from the tutorials and especially from talking to Akshaya afterwards.

-

Please upload the slides from tutorials on time!

The tutorial 1 only lasted 1 hour. You could use the full 2 hours and do more examples.

Tutorial 1 by Benjamin Coors was super good. I never before had a such nice paced and clear explanation of a topic -well done-

Tutorial 2 by Judith Butepage was very crowded and a more complicated topic I didn't understand that much -mostly because of myself not having a clue about HMM's

Tutorial 3 by Akshaya Thippur Sridatta I understood a little more but man you are a very scary person ... but that also motivated me to read up on those HMM's until I understood more.

Tutorial is a helpful supplement to lectures.

did not attend lol

Too crowded to be able to attend.

Prof Akshaya was incredible good to explain HMM.

hmm1 and 2 by akshaya is very good

There were too many students in the sessions, I had to stand up on one of them because there were no more seats.

HMM was too hard. Were given sheets on the tutorial that should be speed-solved because of the limited time of the tutorial. If anything it lowered self-esteem and made it even to grasp the concept later.

there were tutorial sessions (old student only doing the HWs)

My specific exercise for HMM2 spent the first hour going through basics during which contributions were required from everyone. Some who attended appeared to not be in sync with this part of the course and so they couldn't answer. I attended the exercise partly to possibly get the last required insights into HW2 but HW2 was not even covered.

Missed tutorial sessions because the website did not make them look as important as they are

HMM 1 I went to Akshaya. He seemed stressed and almost angry, and I think that this lead to students not wanting to answer questions (also I think it was a bit too fast). For HMM 2 I went to Judith. There were fewer people there and it was a lot more relaxed (I had time to finish all exercises). It was an open environment and people asked lots of questions and there were discussions.

-

The Games tutorial gave a lot of good hints on how to implement a good game AI. The first HMM tutorial was very good when you actually got to do exercises with pen and paper.

The Games session of Benjamin was very very very good. Keep doing that!!!

For HMM1 and 2 I attended Akshayas tutorial - it was very hands on and really helped. The videos were too basic for me.

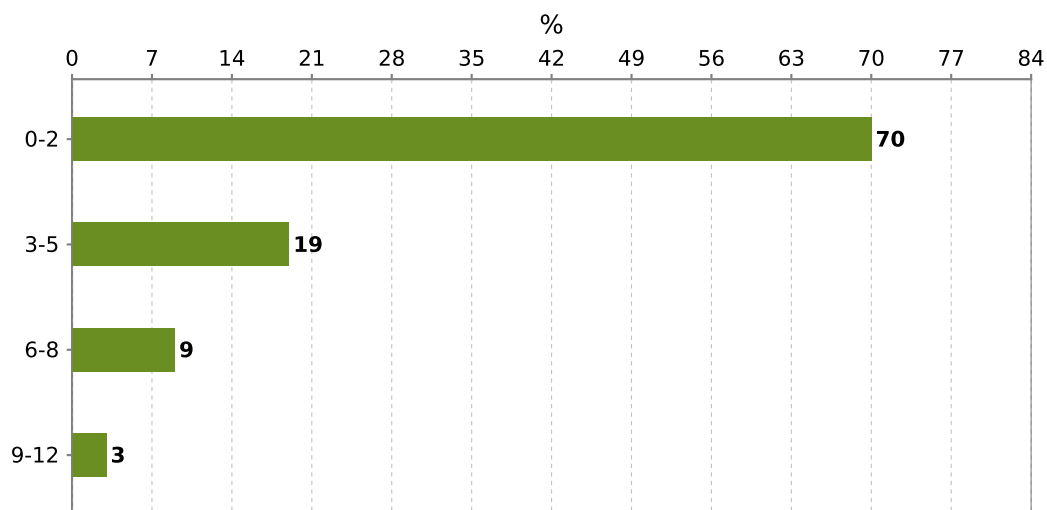
The "tutorials" did not feel like tutorials, but more like putting the students on the spot, I felt forced to answer specific questions or the "tutorial would not proceed". This is not a good teaching environment.

One tutorial on HMM would have been enough. The two that were were both more confusing than they heled, especially the second one. And please find someone else to lead them. The guy who lead the second one insulted my parents by saying they did not provide me with common knowledge which actually hurts since my mother is disabled and have not always been able to be there for me. This kind of behaviour is really inappropriate for a teacher.

I went to both of Akshaya's tutorials. Although I don't really mind his teaching methods, he can be a bit too intense and pushy on students who just want to listen and not really participate.

Please make sure to write in the schedule what each event is, because right now I turned up to an help session thinking it was an exercise, and also had to ask a TA for when the next duplicated tutorial actually was so that I didn't need to show up twice.

How many help sessions did you attend? There were 12 Help Sessions in all.



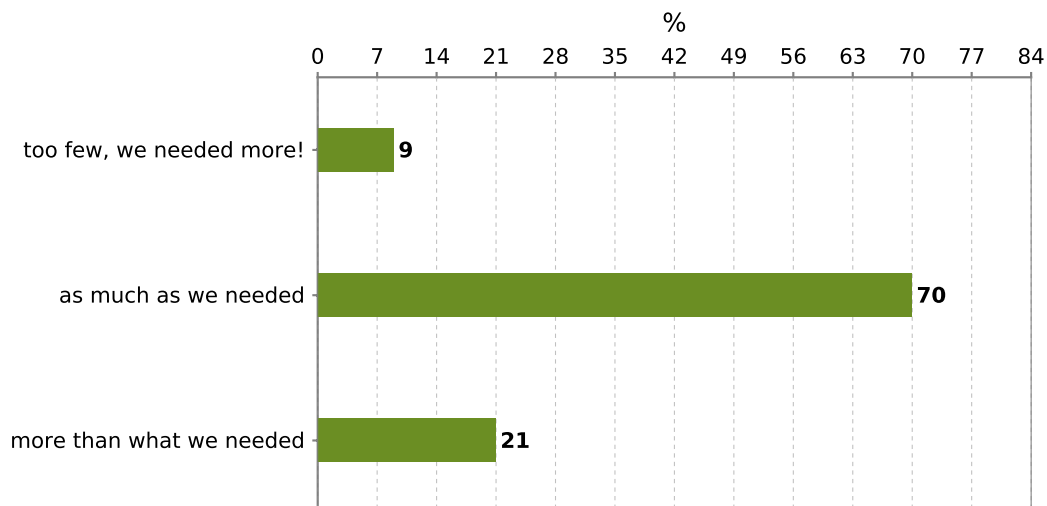
Number	Distribution	Answer choice
123	69,9%	0-2
33	18,8%	3-5
15	8,5%	6-8
5	2,8%	9-12

Average (for numeric answers): 1,33

176 have answered of 301 (58%)

Maximum number of choices: 1

The number of help sessions were...

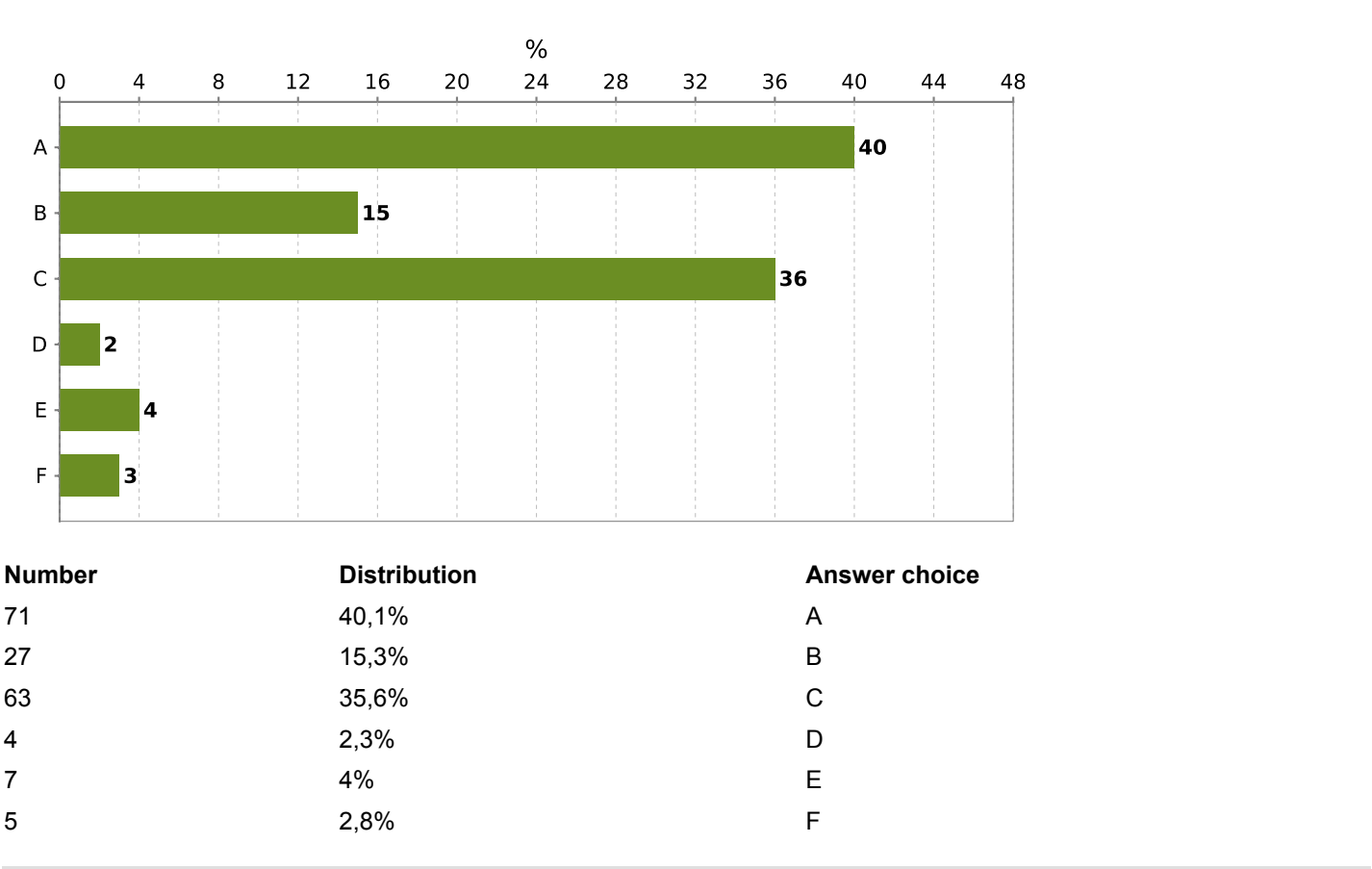


Number	Distribution	Answer choice
15	9%	too few, we needed more!
117	70,1%	as much as we needed
35	21%	more than what we needed

167 have answered of 301 (55%)

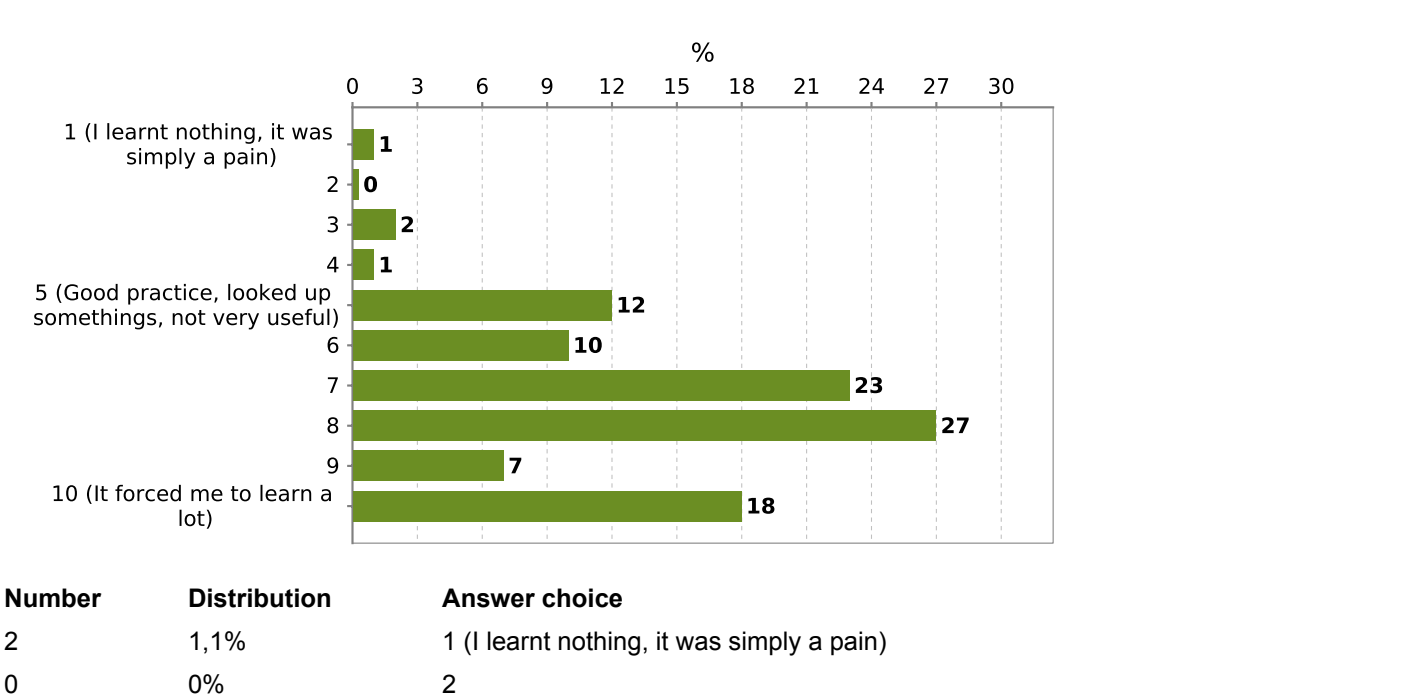
Maximum number of choices: 1

What grade did you get in HW1? (remember this is anonymous) Used to better interpret the results to see if the distribution matches that of the overall results of the course or if it is biased.



177 have answered of 301 (58%)
Maximum number of choices: 1

How useful do you think HW1 was for you to learn the course content?



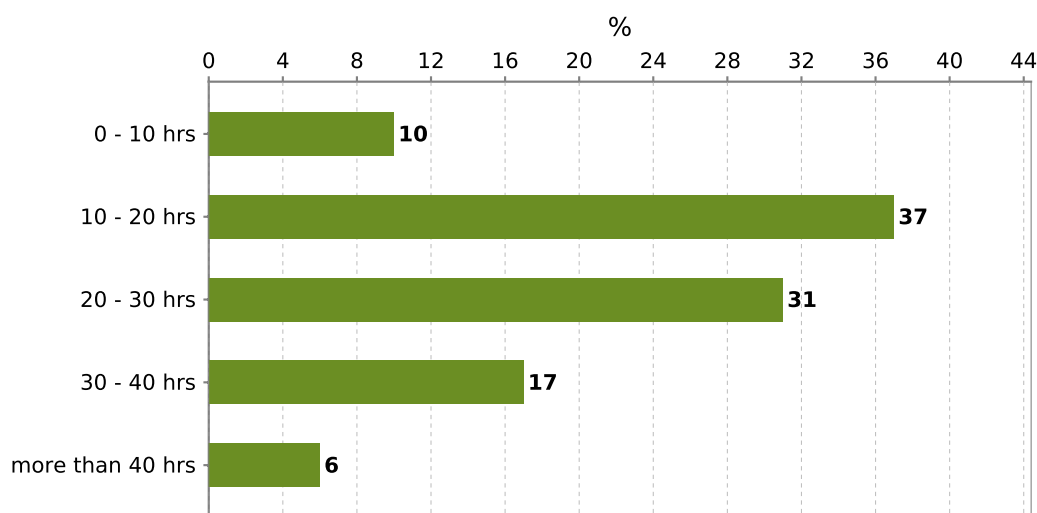
4	2,3%	3
1	0,6%	4
21	11,9%	5 (Good practice, looked up somethings, not very useful)
18	10,2%	6
40	22,6%	7
48	27,1%	8
12	6,8%	9
31	17,5%	10 (It forced me to learn a lot)

Average (for numeric answers): 7,42

177 have answered of 301 (58%)

Maximum number of choices: 1

How much time do you estimate you (individually) have spent on the HW1? (Excluding the final oral exam)



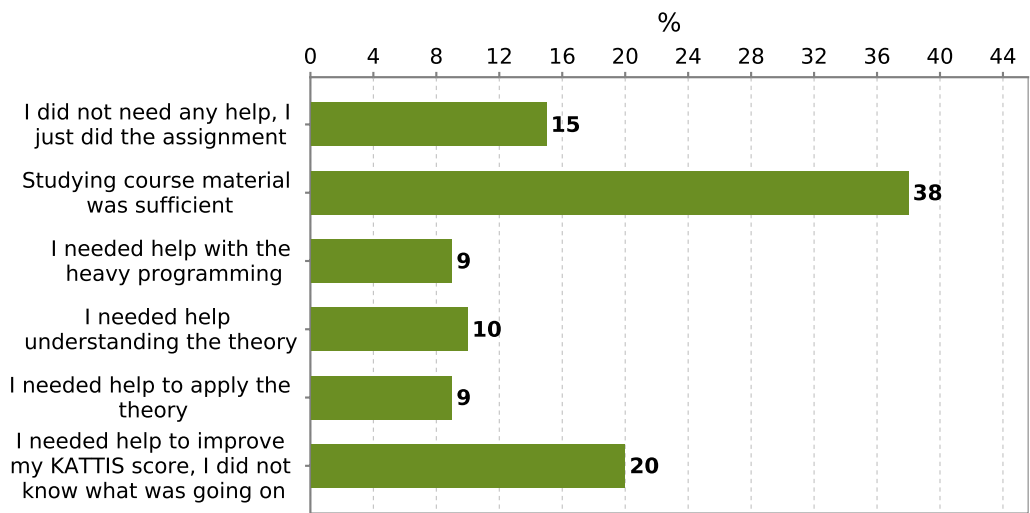
Number	Distribution	Answer choice
17	9,7%	0 - 10 hrs
64	36,6%	10 - 20 hrs
54	30,9%	20 - 30 hrs
30	17,1%	30 - 40 hrs
10	5,7%	more than 40 hrs

Average (for numeric answers): 15,88

175 have answered of 301 (58%)

Maximum number of choices: 1

What kind of help did you need with respect to HW1?



Number	Distribution	Answer choice
26	14,8%	I did not need any help, I just did the assignment
67	38,1%	Studying course material was sufficient
16	9,1%	I needed help with the heavy programming
17	9,7%	I needed help understanding the theory
15	8,5%	I needed help to apply the theory
35	19,9%	I needed help to improve my KATTIS score, I did not know what was going on

176 have answered of 301 (58%)

Maximum number of choices: 1

Additional overall comments about HW1

Text answers:

Got A for score, B for oral exam, would have liked to know why.

Fun project, loved that we could see the game progress graphically in the terminal.

Please include a comment in lab instructions that Kattis will play both red and white. Spent many unnecessary hours rewriting what I thought was a subpar program due to this. Of course one might argue that we should figure it out ourselves, but that doesn't feel relevant for learning the course material.

-

The function for handling the deadline didn't seem to work properly, leading to a bunch of runtime errors on Kattis. Once I replaced it with my own code for checking how much time was left, it worked much more reliably.

Awesome assignment!

Something that we expected would give a good result, resulted in higher Kattis-score, which was tricky to understand and no one seemed to have an answer as well.

Difficult to know what to implement to get higher grades and what kattis gave points for.

The programming wasn't heavy, but we were quite confused about some results since we were certain that our algorithms were good. The help we got was some common programming errors students make, and that solved the problem for us. I really enjoyed the Search topic, so HW1 was very funny.

I wish I started earlier.

A solution which provided end condition values (minus infinity or infinity) or a random integer gave B on kattis while a solution with utility "calculate loss/gain of pieces" gave much less... Very lame tests on kattis.

-

Interesting topic with real world applications (board game agent), I would keep this general topic as the assignment for the search part of the course.

HW1 was well-defined (you can well understand what to do in order to improve your score). HW2 was not like that

Had a computer issue and am not very good with programming. I should have found a partner.

Very nice Tutorial about the MiniMax and alphabeta.

Had a lot of trouble with C++

Good recap on C++ and search, but nothing new really...

kattis is just lol

It was a good introduction to the way of thinking regarding solving AI problems.

I do not remember now how much time we spent on it.

N/A.

For me this was content that I covered during my Bachelor's and therefore not really interesting and just meant to look for programming errors and trying to understand what KATTIS wanted.

It really helped me to map the theory to a practical case. Also, it forced me to do independent research to solve the task, so I could learn a lot. However, this was possible because I had a partner to work with, so that I could spend the first days focusing on theory as I didn't have to write the entire code on my own.

Still haven't done HW1

HW1 was good, on the simple side of things. Hard to debug since you don't know what score to expect in Kattis when it is working.

Good homework assignment but needed more deadline time. A student should be able to get the grade A even if they submit later.

Discussing ideas and concepts with others helped out a lot!

HW1 was really nice. It was easy to understand what was asked of the student and what should be implemented for a higher grade.

I can not play checker at all, may be can be replaced with game that is more commonly accepted.

Missed tutorial and help sessions.

Nasty bug (global variables are bad) got us stuck, couldn't find it until way later. Theory was easy, finding the bug not. Sad, because this affected a lot of my overall score in this course.

It was a good homework. I was a little disappointed to realise that it was simply a fancy search algorithm - it didn't seem particularly "intelligent" - but aside from that it was good.

Please specify that our "color" can change during time.

good exercise to understand how AI implementation

It ended up being more of a implementation problem in the programming language than the real point. Doing a good heuristic for evaluating the board and working with recursion in Java and all of its memory issues were more problematic than doing the pruning and so on. After 42 hours HW1 is still not done yet.

The one issue I had with the lab is that the difference between A and B is not a difference in knowledge, just a difference in randomly changing stuff until it gives you one more point.

Really liked it, got a Kattis score for an A but couldn't be bothered to do the extra assignment.

great!

Small changes really did a huge difference in score. I consider this a problem because we spent a lot of time tweaking numbers instead of implementing something and it was the tweaking of the numbers that in the end gave us a good score.

Kattis was not helpful with time measurements (varied from time to time even with deterministic algorithm).

-

It was very helpful but I had first to improve my programming skills, the material was not the problem

We got stuck for a long time at 19 points until we broke the 20 point barrier, but we did not know why it suddenly performed better.

As with HW2 I would have liked a tutorial at some point showing a good solution.

HW1 gave a pretty good understanding of the subject of games.

It was a very balanced assignment, and you had to go outside of the box to get a higher grade.

HW1 was pretty straight forward, the skeleton that we received was good enough to work with and the task at hand was very suitable for a first task. However, I do feel as if we could have been given more clues or feedback as how to increase the score through the heuristic functions, etcetera.

It was way too focused on end game situations meaning the heuristic had little affect on the score. In fact, our best solution involved using a random heuristic unless a winning position was found. Make it more early game oriented so that a good heuristic actually helps.

We reached a score for B on Kattis but the extra task was so vague we didn't bother doing it

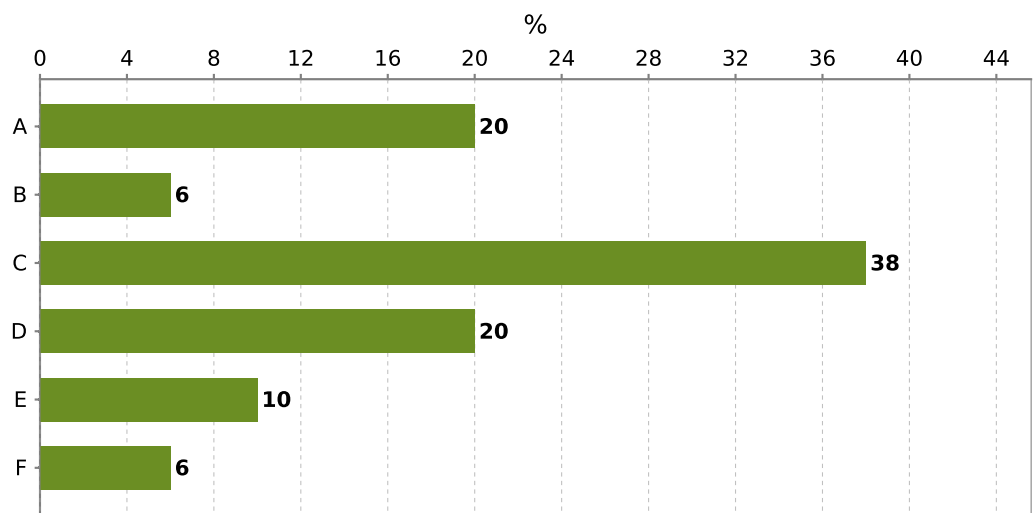
The algorithms that performed well on Kattis were awful at actually winning versus other players.

Relies too heavily on implementation of heuristic.

The scheleton that you provided was too hard to understand. I had same problems because how it works was not well explained and I waste too much hours because of that.

52 have answered of 301 (17%)

What grade did you get in HW2? (remember this is anonymous) Used to better interpret the results to see if the distribution matches that of the overall results of the course or if it is biased.

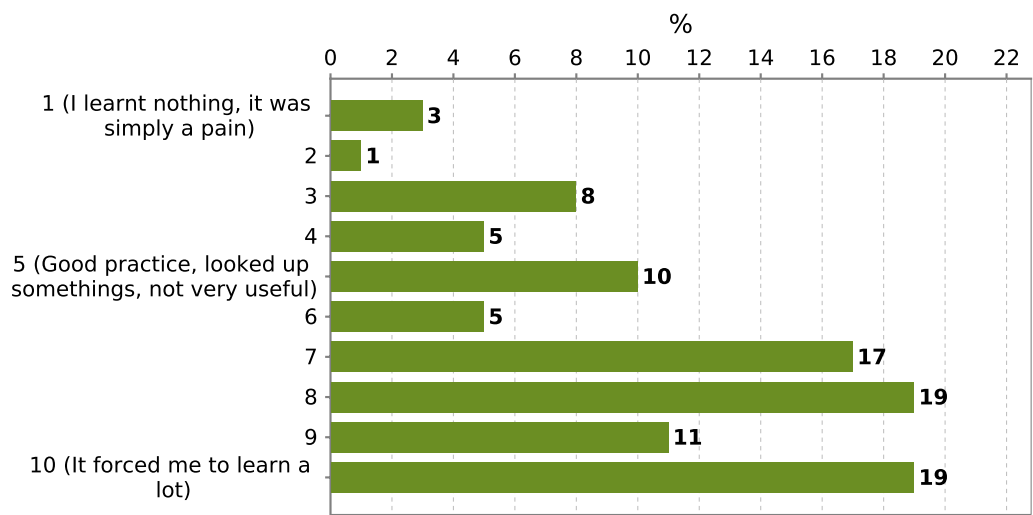


Number	Distribution	Answer choice
34	19,7%	A
10	5,8%	B
66	38,2%	C
35	20,2%	D
17	9,8%	E
11	6,4%	F

173 have answered of 301 (57%)

Maximum number of choices: 1

How useful do you think HW2 was for you to learn the course content?



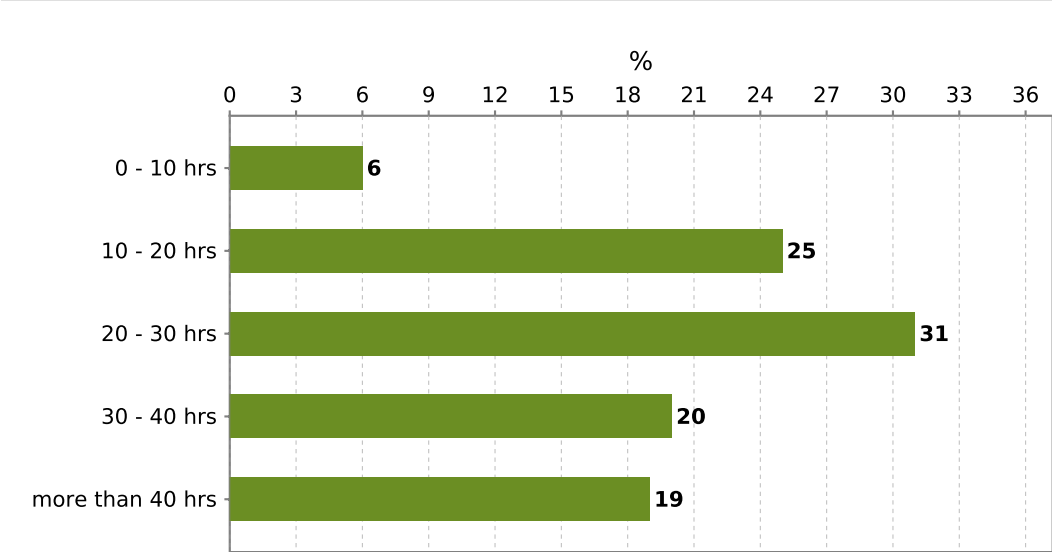
Number	Distribution	Answer choice
6	3,4%	1 (I learnt nothing, it was simply a pain)
2	1,1%	2
14	8%	3
8	4,6%	4
18	10,3%	5 (Good practice, looked up somethings, not very useful)
9	5,1%	6

30	17,1%	7
34	19,4%	8
20	11,4%	9
34	19,4%	10 (It forced me to learn a lot)

Average (for numeric answers): 7,03

175 have answered of 301 (58%)
Maximum number of choices: 1

How much time do you estimate you (individually) have spent on the HW2? (Excluding the final oral exam)

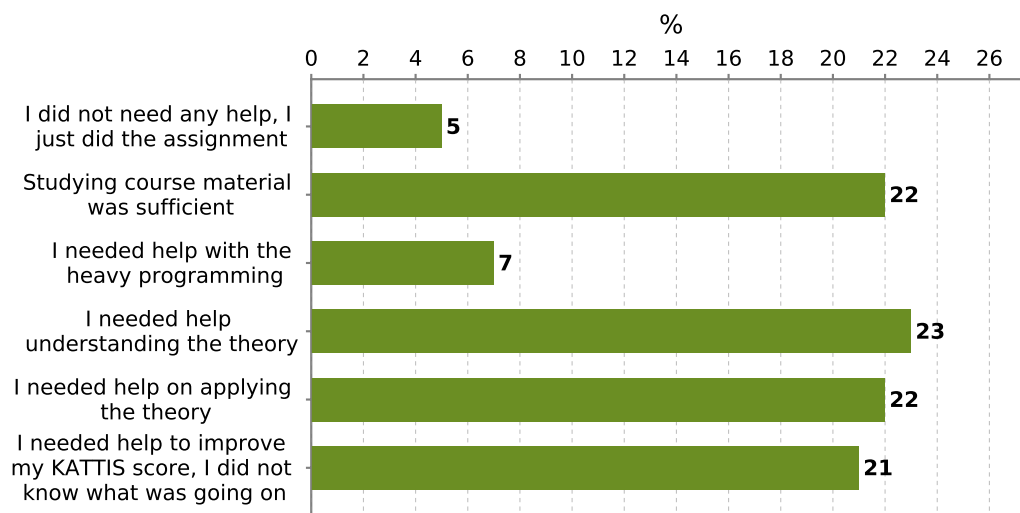


Number	Distribution	Answer choice
10	5,8%	0 - 10 hrs
43	24,9%	10 - 20 hrs
53	30,6%	20 - 30 hrs
34	19,7%	30 - 40 hrs
33	19,1%	more than 40 hrs

Average (for numeric answers): 17,93

173 have answered of 301 (57%)
Maximum number of choices: 1

What kind of help did you need with respect to HW2?

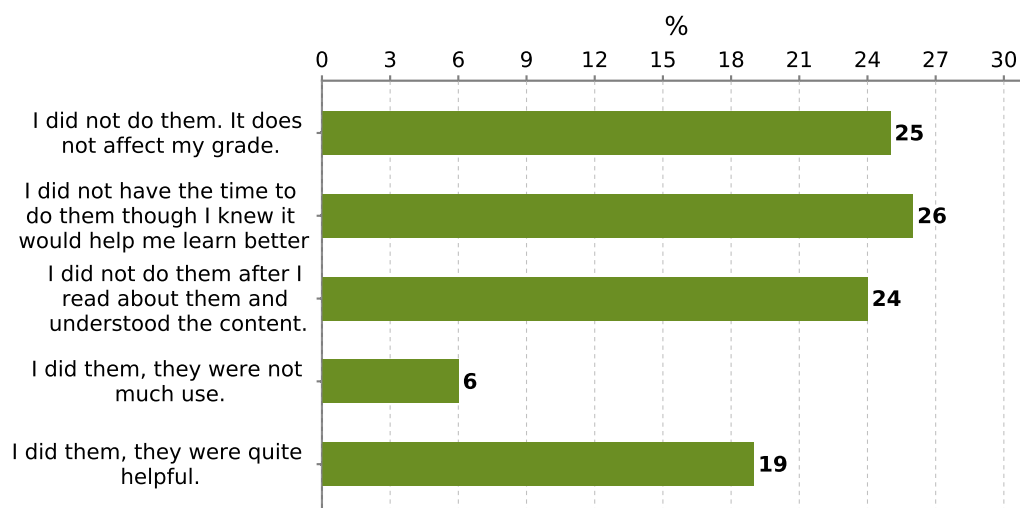


Number	Distribution	Answer choice
9	5,2%	I did not need any help, I just did the assignment
38	22%	Studying course material was sufficient
12	6,9%	I needed help with the heavy programming
39	22,5%	I needed help understanding the theory
38	22%	I needed help on applying the theory
37	21,4%	I needed help to improve my KATTIS score, I did not know what was going on

173 have answered of 301 (57%)

Maximum number of choices: 1

How useful was it to do the preparatory hmm1, hmm2, hmm3, hmm4 exercises?



Number	Distribution	Answer choice
43	24,9%	I did not do them. It does not affect my grade.
45	26%	I did not have the time to do them though I knew it would help me learn better
41	23,7%	I did not do them after I read about them and understood the content.
11	6,4%	I did them, they were not much use.
33	19,1%	I did them, they were quite helpful.

173 have answered of 301 (57%)

Maximum number of choices: 1

Additional overall comments about HW2

Text answers:

Here it felt like the oral exam went to hell, where we could not answer many questions directly but needed some helpful follow up questions from the TA but still got a B. Not sure if this was the idea or we were just "lucky" with our TA.

It was an interesting assignment but it felt very random on Kattis. Our initial matrices were initiated by random numbers and this could give us a very significant variation in score.

I had some problems with the C++ version of the HMM (some of the functions were using a constructor that generated "garbage" instead of initializing everything with zero) that forced me to finish the HW2 using Java.

In a sense, I feel forcing me to have done the prep exercises would have been extremely instructive. On the other hand I would have hated my life as the time required by this assignment was enormous enough already. Perhaps there could be a balance between coding the HMM algorithms and just giving away the skeleton code.

-

I had issues understanding how to implement smoothing and how best to train the HMM on several disjoint observation sequences. As far as I know, neither the lectures nor the tutorials mentioned anything regarding this, even though it was incredibly important in order to solve the assignment (especially smoothing). When I asked one of the TAs, they incorrectly claimed that this was mentioned in the Stamp tutorial (which I had already read several times over). It was, however, mentioned in the Rabiner tutorial.

We had no clue what was going wrong on Kattis.

First tutorial on HMMs was very helpful when doing this! I did not attend the second one.

We talked to others who did exactly like us but got worse and better results. Hard to know which small parameters that would make such a change.

It was not very nice.

Reasonable difficulty for the lower grades (did not complete the task for higher grades).

This was very tough because it required a lot. Not only a understanding of HMMs (which can be tricky in the beginning) , but also comfort in the understanding as to apply it to the game. Although the HW was stressful and difficult, it was very fun and interesting. I think the difficulty scaled a lot with the grade that was aimed for. We could get a decent result in the Duck Hunt Flatland version or the local test cases, and believe our HMM models were accurate. These would however not suffice in the main version and we would have to re-evaluate our chosen model. This cycle went on a lot and much was learnt from that. The help sessions were very good as well, as the TA's could help in evaluating the strengths and weaknesses of the models one had.

We did not finish HW2 on time.

The preparational tasks for HMMs were a little unclear I felt, I didn't know how to start with them so I decided to go straight to the big assignment instead.

Try to be abit more detailed in the instructions for the flatland version, it was difficult to know what was going on since all the insructions were for the A-C version which I did not even have time to complete due to heavy work load in other courses.

I think the low visibility from Kattis was a problem. It was hard to know which parts of our solution that helped and which

didn't.

-

I spent too much time on understanding how to structure the program. It was also hard to get what was wrong. More guide lines are needed.

Could not get a sufficient Kattis score to pass eventhough I spent a lot of time on this. Could not attend help sessions due to courses overlap. I was still alone for this assignment and spent a lot of time completely stuck and not knowing how to solve an issue.

HMM's are awesome

The concepts were not very difficult for this homework (particularly because of the very good Tutorials by Akshaya).

However, the programming was tedious (e.g. underflows from the provided hmm class).

Also, the kattis feedback on this assignment was weird. The same code gave results with more than 70 points difference in the score.

I only did one preparatory exercise, this was to double-check that the implementation already found in the skeleton of HW2 was correct.

HW2 was an awesome experience and with improved programming skills it was not as hard as checkers.

Really fun and interesting exercise! More of those!

I do not know why but getting only 0 when using an apparently (at least that I thought was correct) correct algorithm with no real explanation was frustrating.

N/A.

The Kattis score was heavily influenced by just tweaking 2 parameters (range from C to A), which was a bit strange.

I think I could have got an A if I worked with a partner. Unfortunately, my former partner already committed to work with another person, and I couldn't find anyone to team with. The workload really increases when working alone, and that affected the amount of time I could spend on the code, as my priority was theory.

i didn't reach the E grade until I change the value for the maximum number of iteration in the code provided.. Not sure if you said it was not really working, but in my mind it should work without changing it (unless it is clearly said that it may not work..) But again it is really possible I missed this information on the download page ;)

Still not done with HW2

I understood the theory but when doing the programming it was very hard to understand what i should be doing. Most things i tried seem to have very little effect and i don't know why. I also got exceptions from Kattis that i could not reproduce locally. At which point i lost interest.

Very unclear, feels like a waste of time: the things you have to figure out to solve it has nothing to do with understanding HMMs, only with understanding the sample code etc.

Same comment as in HW1.

As stated before, horrible kattis grading.

It felt that the amount of work was not proportional to the grade. Like making the matrix diagonal heavy, which is easy to implement, improves the kattis score a lot. A lot of information was given the day before the deadline when there was not enough time to implement it. I don't see why this could not have been revealed earlier. There was also the impression that the HMM class should not be changed. Saying "you can change the file" is quite far away from "the number of iterations are far too few and you should go from 50 to 150!". Information that was given the day before the deadline. I think that it should be okay for a TA to answer yes or no to a question about the HW and not have to be really vague and make everyone quite

confused.

I did not like this homework. I didn't learn more about HMMs than I would have done by simply reading the course material, but it took a lot of time. This homework needs to either be revised or simply removed.

very difficult and it is like a slope compare to the HW1 where it is still thinkable. HW2 is not understandable

Due to time constraints I were not able to finish it in time, and will attempt it after the course has ended.

I didn't really have time to spend on HW2, but I felt like it was very easy (1-2 hours of work) to get a C on the lab, while getting higher was much harder. In the end, I knew I had to improve from C to A for it to improve my final grade, so I let it go.

To be honest, I didn't quite understand the reason why we should do this exercises, since they were already implemented in the skeleton. But in the end that was the main topic that was evaluated by the TA, and I thought that wasn't clear at all. If what was going to be evaluated for this exercise were more clear, I probably would go to this exercises sections instead of trying to improve my Kattis score by myself.

To this day, I still have no idea why my solution works better when there are bugs than when they are fixed. When discussing ideas with other students, it seemed that we were doing the same thing as two other groups above the A-threshold and only had scores ranging from C to B. The fact that using a Las Vegas approach with a slightly randomized initialization got us to the A-grade would almost make us be a little ashamed had we not gotten way harder questions during the oral presentation than any group we talked to since.

Like I said above, I think this needs a little bit of reworking since the storks make it too random in my opinion.

difficult theory

-

I think it was nice that we didn't have to implement the HMM class ourselves (except for some simple parts).

The problem here was that we were initially told to focus on tracking and shooting one bird - this was "the core of the problem". But in fact, what everyone discovered after some time, guessing scored much higher. At the last help session before the deadline it was recommended to focus on guessing instead as some people had reached almost A-level with guessing only.

For me, HW2 collided with the project and severe group problems, so I ended up getting a C pretty fast and not pursuing a higher grade. If the parameters for the homework would be more focused, or if we had gotten more theory about HMMs and how they are used in practice I might have persevered.

I would have liked to see a good solution at some point with a proper, smart usage of HMMs. "There are so many ways to solve this problem" is a bit of a copout.

I felt like there was too much java programming and fighting with Kattis and too little focus on HMMs.

Oh god, where do I begin. First of all, it seems horribly designed.

The fact alone that the C++ implementation of the HMM, still today, DOES NOT INCLUDE A DESTRUCTOR FOR ITS DYNAMICALLY ALLOCATED DATA MEMBERS, is just plain absurd. If you're gonna provide skeletons for students to use, please provide skeletons that actually work as intended, when programming in C/C++, use valgrind to check for memory leaks. Or better yet, avoid using C++ arrays with new (that is, using dynamical arrays). There is the problem you have to keep track of the size, and you need to delete them manually, and do all sort of housekeeping. Use std::array or std::vector instead, it's still an array "under the hood" so performance is not lowered.

I would like to add though, that it is good that we did not have to write this entire implementation on our own, because we would never have managed to finish the homework in time. However, adding the functionality that we /wanted/ to implement for the higher grades (e.g. using multiple observation sets to construct a model) was just not possible due to the unnecessary

complexity in the skeleton caused by the aforementioned issues. Just in order to get something working at all, we had to make multiple little botches (v. make a mess of, destroy or ruin) to the entire program.

However, in the end, it appeared that doing random small changes to your program resulted in massively different scores on Kattis, not equating your knowledge about HMMs at all. I'm satisfied with my grade though, given the amount of time I spent on this assignment.

Higher difficulty than HM1, maybe it required more than applying the course (more than in HM1) to get a average mark, and even more ideas and intuitions to get A or B.

It took a lot of time.

The C++ implementation of HMM was horrible, and in the form we were given it more harmful than good regarding the learning process.

1. Instructions were not so clear especially about the checkers in flatland problem. I spent a lot of time, before realizing about the emission states. If the Sample emission file was attached earlier, I could have saved 6-8 hrs of my effort.
2. I think little more information should be added in the instructions about the opponent player who is also shooting the birds.
3. Implementation of HMM should be a part of assignment to some extent, it would avoid all the doubts regarding the memory faults.

I am still not sure what would have been needed in order to implement the shooting properly. I found the topic very interesting but struggled with the implementational details.

Including black storks were a mistake I feel. It led to algorithms that were better at predictions to actually perform worse. It also should've been stated that guessing would be like 80% of the score.

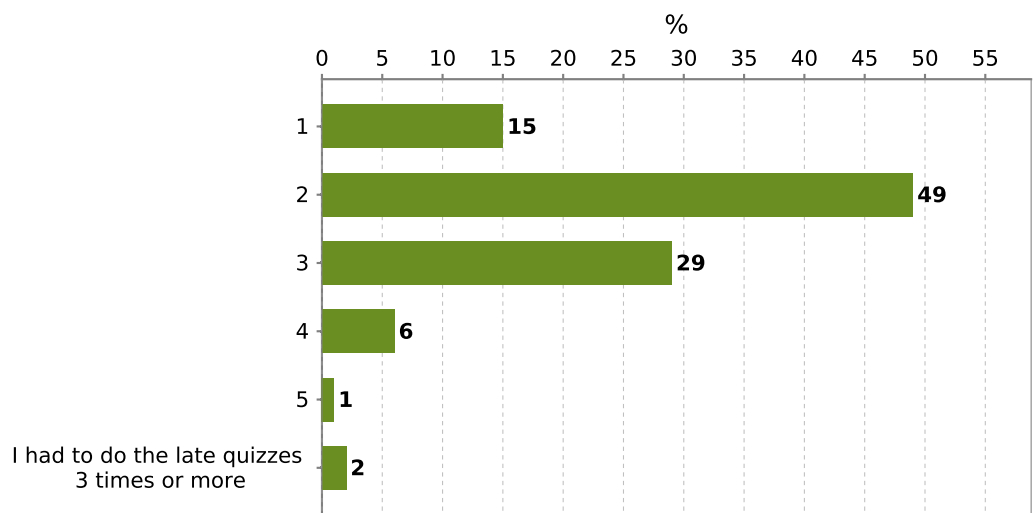
Although, I could get the ideas and methods right, I couldn't convert it into kattis score. A much harder HW than HW1, mostly because of the programming part.

Help sessions were essential for understanding the theory better. Also, Rabiners paper should be official course material. It helped me a lot.

I did not read the full version of the homework till I had finished the Flatland version, so when I did the Flatland version I had no way of thinking that the patterns were the states because the patterns are not mentioned in Flatland. In advance, the explanation about how it worked was not good. If I had not gone to the last help session I would not know about the patterns and I would have failed the homeworks. I waste a lot of hours because of this.

57 have answered of 301 (18%)

How many attempts did you take on an average to complete the quizzes?



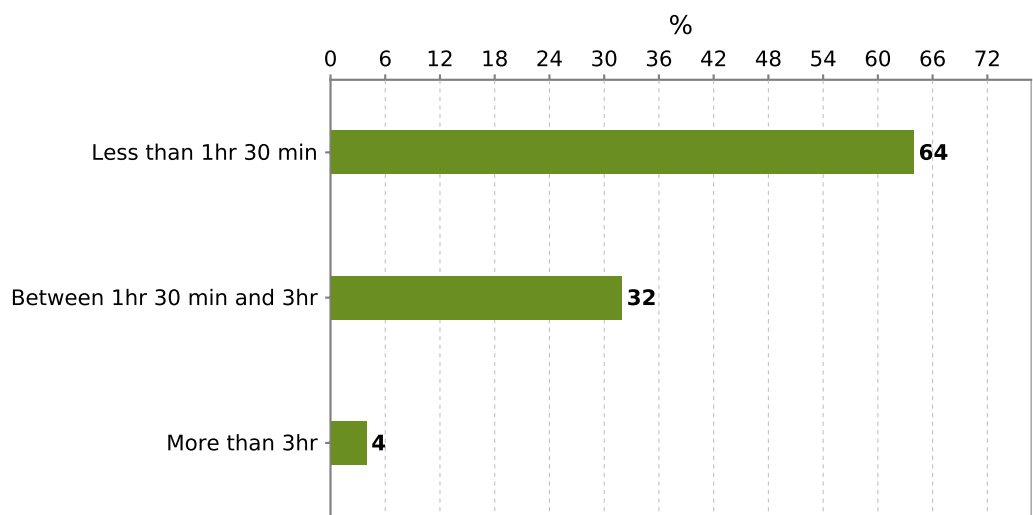
Number	Distribution	Answer choice
26	14,9%	1
85	48,6%	2
50	28,6%	3
10	5,7%	4
1	0,6%	5
3	1,7%	I had to do the late quizzes 3 times or more

Average (for numeric answers): 2,27

175 have answered of 301 (58%)

Maximum number of choices: 1

How much time on an average did you spend on each quiz? (Includes repeated attempts, preparation time etc.)

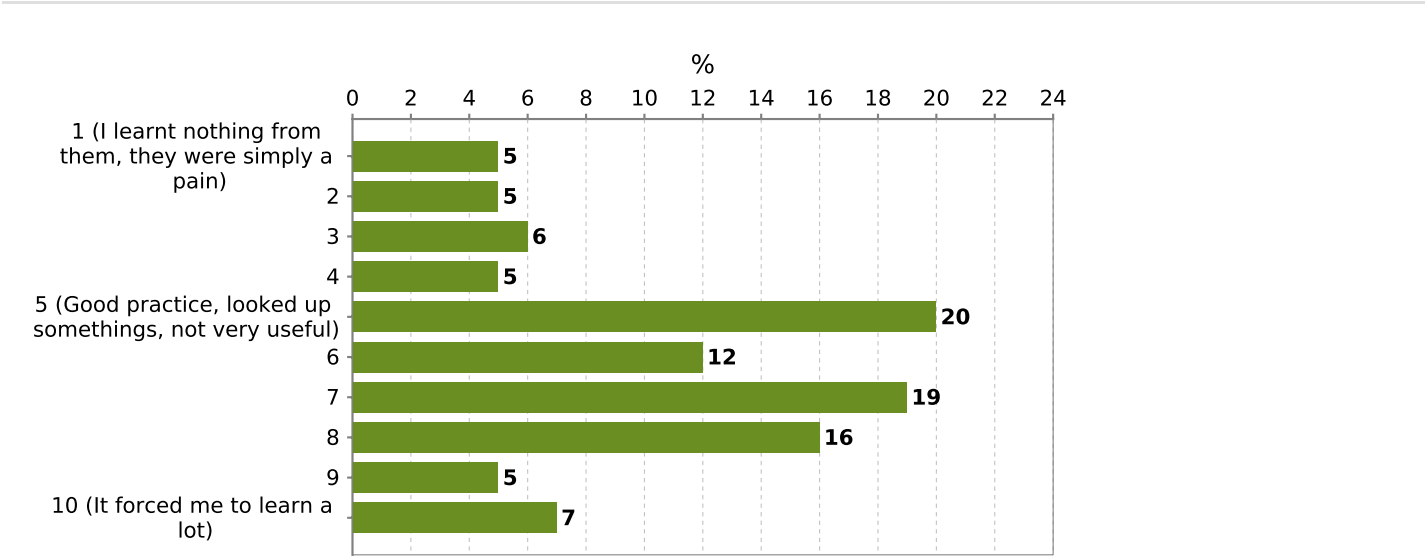


Number	Distribution	Answer choice
112	63,6%	Less than 1hr 30 min
57	32,4%	Between 1hr 30 min and 3hr
7	4%	More than 3hr

176 have answered of 301 (58%)

Maximum number of choices: 1

How useful do you think the quizzes were for you to learn the course content?



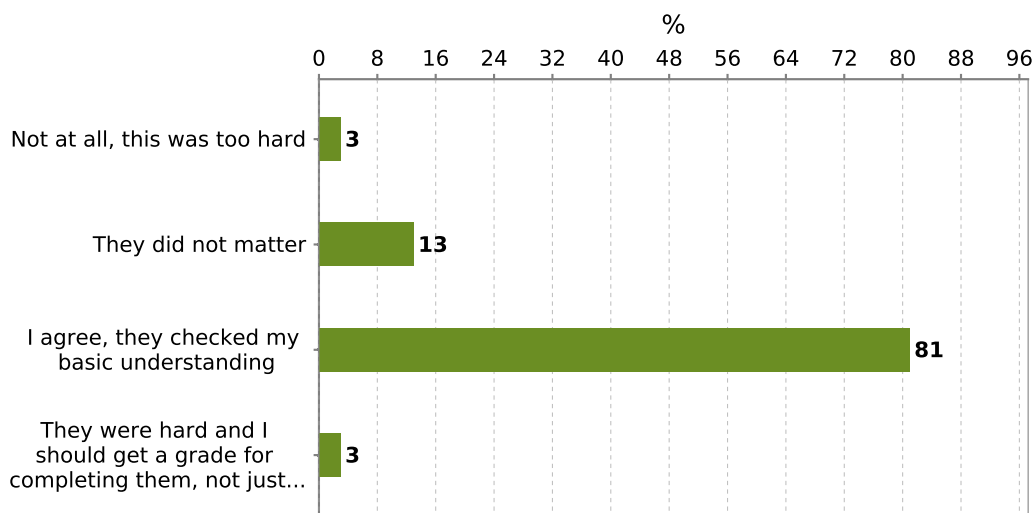
Number	Distribution	Answer choice
9	5,1%	1 (I learnt nothing from them, they were simply a pain)
8	4,5%	2
10	5,7%	3
9	5,1%	4
35	19,9%	5 (Good practice, looked up somethings, not very useful)
21	11,9%	6
34	19,3%	7
28	15,9%	8
9	5,1%	9
13	7,4%	10 (It forced me to learn a lot)

Average (for numeric answers): 6,05

176 have answered of 301 (58%)

Maximum number of choices: 1

Do you think that the quizzes were at basic understanding level?



Number	Distribution	Answer choice
6	3,4%	Not at all, this was too hard
22	12,6%	They did not matter
141	80,6%	I agree, they checked my basic understanding
6	3,4%	They were hard and I should get a grade for completing them, not just P or F

175 have answered of 301 (58%)

Maximum number of choices: 1

Additional overall comments about Quizzes

Text answers:

Some quizzes were significantly harder than the other. Also I have never (and no one I asked) heard of evidence based probability or whatever it was called.

-

Some of the quizzes was at a good level and mad eme learn quickly but a few of them were to hard. Took long time with many tries on them.

Since I rarely completed 100% on the first try, it forced me to at least learn on a superficial level what some of the questions were asking by digging through the lecture slides, online material, and reading material.

Great way to quickly get the idea of different concepts.

Some questions was very confusing and not formulated that good.

Very good!

Sometimes I did not find the answer to the questions in the lecture notes.

They were really great. Please do not change this !

In some quizzes the number of varying questions were not that many. In the cases where one didn't meet the criteria, the second attempt would likely contain many of the questions from the previous attempt. Some questions were simple in the way that the answer is explicitly stated in the lecture notes.

The best quizz questions required one to read through the lecture notes and actually take in what was being written and

understand how to apply the concepts. These were the questions that made one learn more, so I would encourage more of them. However it could make the quizzes more difficult and time consuming which can be too much, because the course already requires a lot of time.

They did help get a breadth of knowledge.

On the other hand, if there is no time to go deep, is there a point in having it in the course?

But, I guess a short introduction is better than nothing.

Feels like I only studied the material to pass the quizzes, and then quickly forgot about it...

Sometimes quite difficult. B

They forced me to study continuously but I don't think that they improved the course very much

A good way to encourage continuous studying. Don't change this concept too much in the future.

-

Some of the quizzes checked things I hadn't seen before which was somewhat hard.

I hated the Planing and Logic quiz because I didn't understand much in the lecture and then used google to solve most of the questions without learning really about the subject even through it sound interesting.

Again, there was a significant difference in the quality of the quizzes. Some were well made (e.g. HMMs, search). Some were terrible (Logic, Making decisions): the questions were badly formulated, sometimes ambiguous AND I received almost full points on both of them without actually understanding the material but just using PoE (process of elimination) on the answers (sometimes without looking at the text of the questions).

The quizzes are a great idea as I had to recap the course material.

One of the quizzes I got was a many long calculatiing questions and the second attempt had only one of these. So I felt the balance on what type of questions that were put togehter was a bit uneven. I was the one regarding probability.

N/A.

In 1 or 2 quizzes answering was a bit harder and more than just basics.

Also there were some (obviously intended) trick answers, which aren't really necessary (e.g. with some Graphs as the display of them already was a pain).

The most useful quizzes were the introductory one (having to read up for that quiz really answered to all the doubts I had concerning course organization and grading criteria) and the basic probability quiz, as it was a very useful tool to review probability.

I think quizzes were extremely useful to review my background and keep in sync with the lectures. They didn't help to check whether I had a deep understanding of the subject though, as 5-6 questions are not enough in my opinion.

Are they really necessary? Seems like they just stress the students. If you want the students to learn, maybe instead put only relevant course material (material that will be used on the assignments) and then the rest as links to other tutorials/videos.

The quizzes should give you bonus, not be mandatory. If this change, they could also be harder and actually mean something.

Very nice.

But I didn't feel like they added to the course. They were almost completely separate from the HW:s and project, so besides doing them they added nothing.

Some of them were a bit strange but overall they were OK.

very good !

They were a nice touch. I can see the point of evaluating basic understanding.

If the point of the quizzes was to evaluate some basic understanding level of the topics, some of them (mainly the last ones) failed to do that by being too hard. Some of them I passed just on the last attempt after spending several hours studying the topic, I don't think that classify as 'basic'.

No freetext box for the project, so I'm writing about it here. I don't actually know my project grade. I got a VG, I think, or maybe that's just on the presentation. In Ladok I got a P.

The one about Logic and Representation of Knowledge was quite hard though

The HMM quiz was not so useful and the logic quiz was not related to the lecture, I needed to read the book a lot

Quizzes were too easy to pass simply by strategy. You could pretty much start a quiz, look up the answer and still finish in under 10 minutes.

while i did like the quizzes, they were still a lot of work and kind of got pushed to the side due to the workload, and had to be rushed which meant more guessing than it should and some trial and error

The quizzed contributed to this course taking the majority of my time.

I think it would be good if there were some hints about common mistakes to questions you answered wrong. This way unclear questions might become more clear the second time you answer them as well.

The quizzes are very good. They forces us to study the course material.

I thought the quizzes were mostly fun to do, it forces you to actually read the book. The quizzes on logic and planning were not useful because (especially the logic one) they heavily relied on a lecture about logic which was not well delivered. For those I ended up using the elimination method and common sense, which was not really pedagogical.

Note about the "grade on the project" question below. At this time it only says VG in Rapp, which I believe is in the A-C bracket. You should adjust the answer granularity.

They were very varying in quality. Some could have clearer descriptions, for example don't refrain from double negation never.

Shallow learning. Not useful.

More solving type questions should be added in place of fact based questions.

Keep it up!

I liked them alot. Simple way to force you to look up the lecture materials without it being stressful.

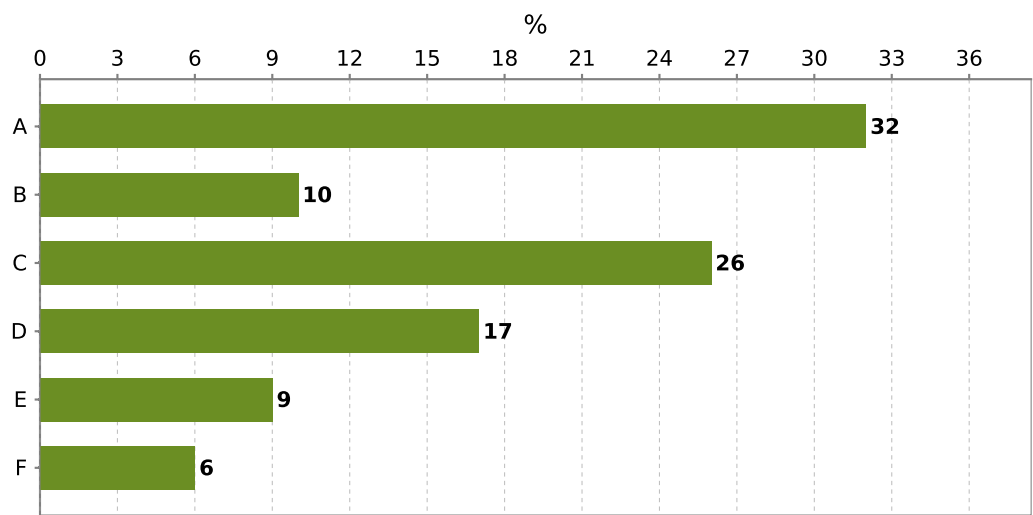
Please release the solutions to the questions after the overall deadline. Although we have multiple attempts to find the answer, it is useful to learn where we went wrong.

I felt that when doing the quizzes, I just looked at the lecture notes and used "rule of elimination" (uteslutningsmetoden) to answer some of questions.

This means that I did not really so much from doing them.

47 have answered of 301 (15%)

What grade did you get on the project? (Remember this is anonymous, we need this to understand your responses)

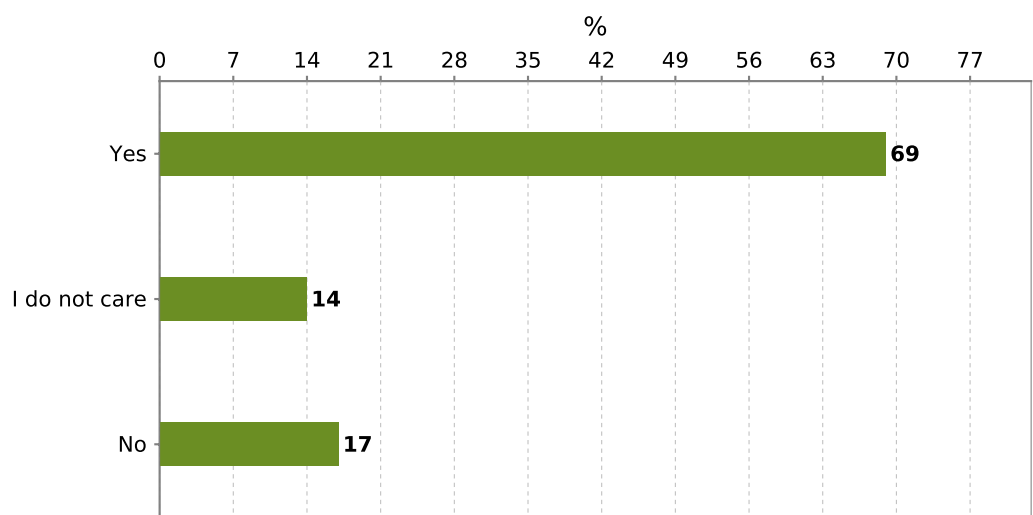


Number	Distribution	Answer choice
52	31,7%	A
17	10,4%	B
42	25,6%	C
28	17,1%	D
15	9,1%	E
10	6,1%	F

164 have answered of 301 (54%)

Maximum number of choices: 1

Do you think you have been fairly graded for **your** work in this group assignment? Please think about your contributions in comparison to other people in your group.

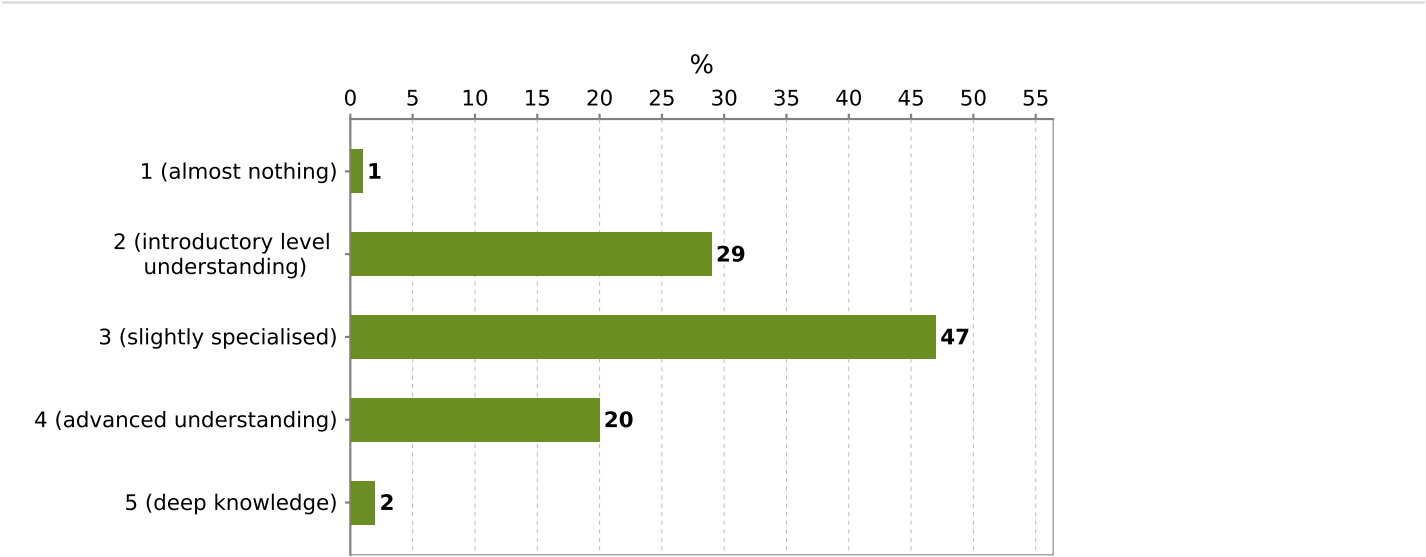


Number	Distribution	Answer choice
116	68,6%	Yes
24	14,2%	I do not care
29	17,2%	No

169 have answered of 301 (56%)

Maximum number of choices: 1

How much do you think you learnt about NLP doing the project?



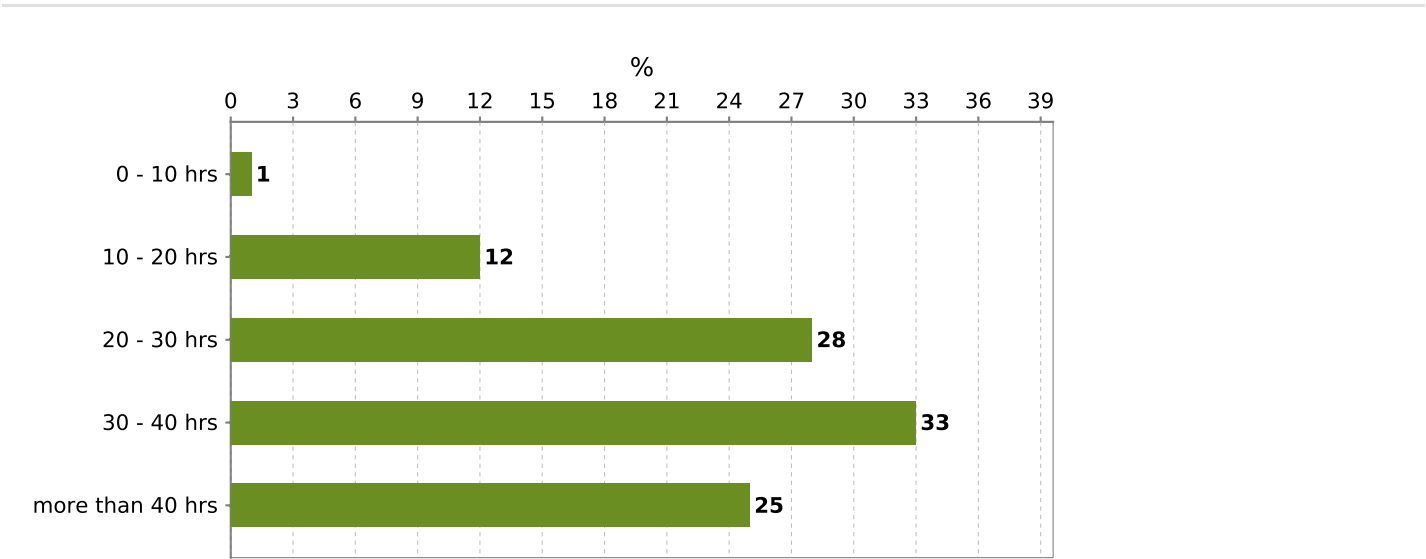
Number	Distribution	Answer choice
2	1,2%	1 (almost nothing)
50	28,9%	2 (introductory level understanding)
82	47,4%	3 (slightly specialised)
35	20,2%	4 (advanced understanding)
4	2,3%	5 (deep knowledge)

Average (for numeric answers): 2,94

173 have answered of 301 (57%)

Maximum number of choices: 1

How much time do you estimate you (individually) have spent on the project? (Excluding the final oral exam)



Number	Distribution	Answer choice
--------	--------------	---------------

2	1,2%	0 - 10 hrs
21	12,3%	10 - 20 hrs
48	28,1%	20 - 30 hrs
57	33,3%	30 - 40 hrs
43	25,1%	more than 40 hrs

Average (for numeric answers): 22,5

171 have answered of 301 (56%)

Maximum number of choices: 1

Constructive feedback to Patric as a lecturer

Text answers:

Great lecturer!

Very good. Enjoyed the lectures

-

Great lecturer, I have no complaints. Knew exactly how to make someone excited and interested in the content of the course.

During lectures: Not too much jokes and not too little, very good balance.

Very pedagogical.

I think the lectures were balanced in content given, interaction with the students and bits of "tension-breaking" humor. What could help even further would probably be making the microphone louder, as the lectures always had a quite big amount of attendees, requiring large rooms that quite often made Patric hard to hear.

Really good, nothing to complain about.

-

Swear less! Jokes aside, keep doing what you are doing. It is great stuff.

Good work, keep on doing what you do!

I liked most of your lectures.

Great lectures! I think your lectures showed a great level of encouragement and were very helpful. The extra effort of explaining when students doesn't understand is very good. An example of this would be the HMM hand-out and the walkthrough of how to apply it.

Great, good presence, interesting

Very good lecturer, would recommend a little bit more of practice in HMM as he did with the game lectures, where he had programs showing what was going on.

YOU ARE AWESOME! I admire your way of holding lectures, you somehow made this course easy!

Sometimes I feel that you are a little too harsh in your written communication.

Very good.

Really good lectures. Patric is able to transmit the knowledge really easily and intuitively. Nothing should change.

Dynamic and clear.

Keep up the good work if you do a example with like buying the envelops please go through with it and let the students actually by them.

Great as a lecturer!

You are one of the best "explainers" that I have ever had a lecture with. You ask very good questions that helped my understanding of the content. You include just the right amount of humor/fun in the lecture to have a light mood but still concentrate on the content. Brilliant, keep going.

Good lectures! Fun and inspring.

Nice to mix in humor in the lectures.

N/A.

Really enjoyable lecture style. Differs a lot from what i am used to, but i like it your way. Keep the enthusiasm up, we need more teachers like you! ;)

Good

He's very clear with explanations and provided useful examples to understand complex concepts. It was really good to see showcases of his research work; it allowed me to have a better understanding of AI in general, and kept my interest very high throughout the course.

I like the lectures. But hope there can be more communication after class.

Good.

Why are you so boss man

Good lectures! You make the content interesting.

It was always interesting and fun to go to the lecture! Just continue like this

Very nice lecture slides.

Very helpful and willing to answer questions.

good

Give better feedback, that was horrible. Just saying "reference missing" and giving 50/100 doesn't help me improve as a student, it is purely a grading. There's also no way to see what you though were good or bad in the project, so this entire experience was really demotivating. I had high hopes for a fun course, but the poor feedback and awful indian TA made this one of the worst courses in my time here at KTH.

awesome

very good in lectures and managing the course

Making the course material enjoyable, great lecturer!

+

Very good lecturer and down-to-earth professional! What I mean here is that he seems like one of us, because he is close to the students. All professors should be this way, but this is not the reality. So I believe it is very nice that he is this open to the students. This encourages the students to make questions, make critics and learn from him.

Not far away from best lecturer ever (as in nice, clear in his explanations and motivating).

good speaker, interesting lecture material, fun to see examples of programs during lectures, overall much better than most

Awesome lectures

Very good. Maybe start with HMMs a bit earlier (or at least warn about that part).

Perfect. Understandable, eloquent, illustrative, helpful, understanding. Perfect.

Very good speaker! Good sense of humor! Excelent presentations

Explained concepts well.

Perhaps you could try smiling sometimes

I think Patric did a very nice job, very pedagogic and interesting to listen to. Also brought out a few laughs with jokes and funny remarks :)

Patrics is one of the best professors I`ve ever met and I hope he keeps his humour!

As a lecturer, Patric was really fun listening to. He could however be a bit nicer in the e-mails.

Don't change a thing. The lectures were great and helped me a lot.

Good tone, pace, and overall nice to listen to during lectures. Also easy to talk to in person.

I truly appreciate Patric's effort as a lecturer. He heard and discussed every possible idea from the students. This course is very well designed by the AI team.

Awesome! Keep doing what you're doing!

Good, should go into details for search and HMM. Lessen topics to achieve this.

Good lectures!

I'm a huge fan of the way Patric carries himself and explains the concepts in the lectures. Great mentor.

Same lectures were very good, others were very bad.

60 have answered of 301 (19%)

Constructive feedback to Johannes as a lecturer

Text answers:

I thought these lectures were a lot harder to follow. Might have to do with the topic at hand. Could use a milder tone on the forums.

-

It was unfortunate that your microphone broke during a lecture, but I could not pay attention when I could barely hear you.

Good work as well.

The logic parts of the course are quite familiar to CS students. Something our prior logic course did not cover were applications of these concepts. Perhaps showing some application examples could help students get more interested.

Good, good slides, just make sure the technical stuff is working (like the microphone).

-

Maybe you Johannes should be more clear about some concepts and try to interact more with the students.

Please make sure that the microphone works the first half of the logic lecture was not understandable at all because I could not hear you.

The second half I could hear you but still didn't understand much - also to missing the first half-

also please make a better structure in you slides If I had to look something up it was easier for me in Patric slides then yours

I got the impression that you did not care whether the students understood the material or not. (And I believe I am not alone in this, given that about half of the class left during the break.) E.g. When you ask whether there are questions and nobody says a word, that means everyone is probably confused or does in fact not even know what to ask - and you just kept going. Your lectures on Logic was terribly dry (in German: heruntergeleiert). Also, you did not motivate, why the lecture was given. What is this used for? What would I ever use it for?

If you don't want to give lectures and teach, don't let people make you do it.

If you want to improve, here's what I think you should do differently:

- Motivate why you are talking about what you are presenting extensively.

- If you topic is as dry as Logic: give loads of example applications (not just examples of syntax, that's just as dry as the theory to me)

- Show that you care about the students understanding (ask Akshaya about that, he does a great job at exactly that)

- Engage in more of a conversation with the audience, get feedback about whether students are understanding or not.

- If they don't understand, repeat ! Don't just keep going.

I'm sorry if this sounds a bit harsh, but I really did not appreciate the way you presented. It seemed like a waste of both your and the student's time.

N/A.

Good

I dont know who you are

Wear a microphone of excersise in speaking louder.

Speak a bit louder.

Please try and speak louder. Try and get more 'connection' with the audience.

-

He was explaining everything very well, but there was a problem with the microphone. He should have spoken louder!

spoke too quiet, if he is the person i think he is

Please use a microphone so we can hear you better. Try to make the lecture a bit more introductory (I don't think most people had the time to read the stuff in the book before the lecture).

-

Did not understand a single thing about our Logic topic.

I think Johannes needs to take into account that he has an audience; and that audience does not have his knowledge about what the topics he talks about.

I believe the lectures about logic were a bit difficult to understand mostly because of all the mathematical notations. It would be great if Johannes could try to not rush through the material but instead go a bit slower and make sure everyone understands the content.

Improve your slides and don't make the quizzes so hard to understand. I spent most of the time on your quiz but did get the least out of it.

Did not attend his lectures.

Learn the equipment, and practice scenarios when this fails, especially how to fill a room with your voice. Unfortunately I couldn't hear you at all. Obviously you put in a lot of work for this, it's a shame if that goes to waste.

You need to speak up, it was difficult to hear what you were saying at times during lectures.

A bit slow in some parts and could speak up a bit. Otherwise I believe he had more difficult subjects to discuss than Patric so still well done.

Maybe talk louder / use mic. I did not hear anything in the back (even when people asked to speak louder), which made me leave in half time.

He didn't know how to use the speaker so none could understand what he was saying. We told him to speak louder but he didn't. I left in the break.

30 have answered of 301 (9%)

Constructive feedback to Akshaya as a TA

Text answers:

As a lecturer is great. Very helpful at tutorial lessons. But I found it hard to follow his thought when talking with him. Of course there are some fault of me because of my poor English. Akshaya used to speak in a strict tone. Thus once I used an inaccurate word then it would surely become a mess.

Has a highly pedagogical approach. Though classes were useful, it didn't suit me.

Keep up the worksheets, they brought back happy memories of high school and really helped me learn.

Could use a milder tone on the forums

Don't look bored when a group is presenting their project. I understand that one might be tired after listening to a couple of presentations but it felt very rude when we presented and you looked down on the table instead of us and our work.

Good overall knows his stuff, but can be a bit harsh at times. Just chill out a bit bro.

Very intimidating big bear TA, his tutorial sessions were boot camp level! Great stuff! Keep doing what you are doing. But don't scare your students too much!

Was on one session - was a very good practice which helped a lot but you really need to work on your attitude. You should be there to help, not refuse to if it doesn't go your way.

Don't be too harsh while teaching. Your work was great.

Probably the best teaching assistant I have had! The tutorials have been very helpful and very funny to attend. Not only that, but you really take your time to help everyone and that has really been of great help throughout the course.

Great, appreciate the preparation

I understand he wants the class to participate, but there are times when you go to the tutorials because you need more help, maybe you couldn't go to the lecture and you're a little lost. I think it could be a little confronting sometimes with the way he questions, it could be a little intimidating.

You are not automatically entitled to respect, especially when you show none to your students.

Bulk up!

I really appreciated the handouts during tutorials.

Very good.

Really, really good feedback, effort and tutorials. Nothing should change. He helped me a lot.

Dynamic, clear and forces people to participate. Can be upsetting at first but it is a very good way to keep the class interested on what is going on. Would recommend going to his tutorials.

Your knowledge about everything is very scare also you pokerface is unmatched ... keep up the good work I did a lot of extra studies in fear for you.

The best part about your tutorials for me was that I could feel how you wanted everyone in the room to understand the content before we left the room. You explained all parts of HMMs brilliantly in the two tutorials you gave.

You show just the right mixture of charisma/humor and discipline IMHO.

Thank you & keep going :)

Good tutorials and very helpful in general! Thank you!

This is feedback on the questions here about the project:

The grade set on me right now in the project is not an A-F grade, so I can not answer what my individual grade is and if it is fair. It is just a P and what span we are in.

N/A.

I liked the HMM1 exercise (I could unfortunately not attend HMM2) and your help with the project! Thanks!

You're nice, but can be a bit intimidating.

Had not many interaction, but even within this small number i felt a bit intimidated and uncomfortable with the harsh treatment.

Shift down a gear for the next year and be a bit more humanely, so students can show their skills more easily instead of losing their mind due to nervousness.

HMM concepts were taught very well in tutorial session.

I really liked the way he can handle large groups of people. His teaching was very clear and time-effective, and helped me a lot organizing myself for the project. My group was really lost at the middle of the project, and Akshaya gave us a lot of help in choosing which direction to give to the project, in order to keep it relevant and interesting. He gave us a big confidence boost, that allowed has to make the final sprint and get an A for our work.

Also, I liked that during the presentation of HW2 he checked my understanding of the theory rather than my coding skills.

Akshaya you are the best, please come watch our future presentations :)

Good hmm2 exercisen, good discussions during lab presentations.

I think the overall goal of a teaching assistant should not be to make students afraid to ask questions. And the personal mood should not influence the grading of students. I think that it is not fair if students, who achieved a Kattis score worth an A, who wrote all the code by their own, who understood the theory of the HMM, who know how the code works and who could answer all but one very specific question in the oral exam only get a C-D. Moreover, there is no reason to take critic personally and to respond indignantly.

Willing to answer questions.

You were horrible, so was your feedback. Condescending, hypocritical (since you guys were always late and had horrible instructions, but you complained about us not being able to follow instructions nor deadlines).

awesome

very good session on HMM1 and 2, good method of teaching (with forcing the question and answer)

Please, calm down. I know you're trying to help us students, but it seems like you haven't taken comments from last year into account. It's a shame, because it seems like you really know what you're talking about and people could really learn from you, but it won't work if you're being aggressive and condescending. I'm not trying to pick at you, and I can't imagine the time and effort you must have put into this course, but you have the potential to be a great teacher, and it's sad to see people get a negative view of you because of how you act.

The forum thread where someone had received the comment "You have failed this requirement. You will no longer be able to get a grade higher than D on the project." is an example of what I'm talking about. Your comments in that thread felt very condescending and the one being aggressive was you, not him.

Too stressed out in general and a very different approach of teaching (the tutorial). I know you want to teach the students, but it's intimidating getting pointed out to answer hard questions in front of class. It draws attention away from learning and puts it into anxiety instead (I know it isn't "dangerous" saying something totally wrong in front of class, but this was what I was experiencing in your class).

Very joyful and eye-catching way of teaching. Very nice!

HMM 1: Take it a bit slower and repeat yourself (HMMs are confusing the first time you see them). Relax.

-

Good, immediate, understandable, helpful.

Very humble and comprehensive! His feedback helped me a lot to understand my weak points in the project but it also enabled me to feel more confident in doing hard work

His way of teaching is impressive but he needs to relax a bit. Take a deep breath sometimes.

You are great at making the atmosphere tense, scaring students into saying something stupid. As such, I suppose you do serve a purpose. I have however seen you be very rude towards other students at several occasions. All of them uncalled for and rather off putting. I would say that I enjoyed this course, if it weren't for you. I'm sure you're a good student, just not a good teacher.

Akshaya seemed very knowledgeable and competent in the field of AI. However, sometimes his tone can be perceived as a bit aggressive so he might want to think about that.

You're great in scaring the students. Keep that.

You HMM tutorial was awesome!

His teaching style did not reach out to the students in the best way possible. He used an aggressive tone, and the students felt a very disrespectful attitude from him - as if we were bullied because we did not understand anything regarding the tasks at hand. He was not professional and I got the feeling that he became "power-mad" because of his authority as a TA. He should learn how to keep a simple and professional tone in official forums (e.g. Discussion forum on Moodle).

Good hands on material. Don't waste too much time waiting for people to respond/interact, unfortunately there is not an interactive culture at KTH. Maybe try using candy as incentive (reward a response with candy, correct response gets more), this has worked in several "clicker" style lectures.

Akshaya is one of the best TAs I have seen so far. Extremely helpful, understanding and patient with everyone.

Please, please, please. Tone down the "my way or the high way" attitude. However, you are very nice to talk to when things

are going your way and I spent many minutes discussing different solutions for various tasks with you, which felt very rewarding. Thanks for that.

I really liked the exercise sessions conducted by him on HMM1 and HMM2. Those sessions helped me understand the concepts much better. I appreciate the class discussions carried by him during the help sessions.

I believe you are the one who accused my parents of not providing me with common knowledge. I despise you to the fullest extent and hope that you find another career that teaching when you make those kind of comments.

A bit too harsh and intimidating. But I realize it comes from a good place, he wants us to learn, understand and participate

Very intense and occasionally quite rude. Personally I never had a problem with Akshaya but I've noticed him snapping at other students for simply asking questions (or not asking questions in the tutorials). Furthermore, this behaviour extend to the discussion forum where he has called students "being aggresive towards T.A" etc.

I think Akshaya definitely one of the best T.A's I've had because of his drive to make sure the students ACTUALLY understand the content of the course. However, he could do well to tone down now and then.

His comments on moodle contained misleading information.

Very good, explains the theory well and is devoted.

Maybe take it a little easier during the exercises. I understand that you want people to understand the material, but giving them 10 seconds does not really give us any time to understand the material.

Väldigt dålig.

Calm down a bit.

Attended HMM1 and HMM2 sessions with Akshaya. The efforts Akshaya put in during the sessions speaks a lot about how much he cares for the students. Great mentor.

Excelent teacher. Maybe in the exercise about HMM he spent too much time in same aspects that, although they were interesting, they were not useful in the homework. But he is still the best one.

61 have answered of 301 (20%)

Constructive feedback to Kaiyu as a TA

Text answers:

Did not interact with.

-

Nice and good at explaining.

Fantastic

-

Didn't really get to talk to him.

Good way of dealing with people keep it up

N/A.

A nice and knowledgeable TA

Dont know u bro

Gives good explanations during help sessions, we always hoped to get your help when we were stuck.

No opinion.

Games: It was good, you screwed up a bit on the alpha-beta pruning so prepare a bit more next time.

-

I did not like his way of explaining things. In case we have a problem, we barely get the things clarified from him.

Very good support and very competent

Very good! Did his job, and very professional.

Discussion with him during the help session of HW1 helped me understand my mistakes and I was able correct them thereafter.

Never had him.

19 have answered of 301 (6%)

Constructive feedback to Joshua as a TA.

Text answers:

Did not interact with.

-

Be a bit more firm. He was tentative at times. You know what you were doing.

-

-

-

Didn't really get to talk to him.

N/A.

Dont know u

No opinion.

awesome

-

Very helpful guy. Tries to understand the problem and explains in the simplest way.

N/A

He was really helpful in clarification about the instructions during HW2.

Very good as well!

16 have answered of 301 (5%)

Constructive feedback to Judith as a TA

Text answers:

I attended your HMM classes. Very good at explanations!

Was good at explaining (attended second HMM session)

Very patient and pedagogical TA. Calm and collected.

-

Fantastic

-

Didn't really get to talk to her.

Very good exercise sessions! Good answers to questions and was good at presenting the exercise content.

Good tutorials!

Good exercises! (I only went to hers so I don't know how the other was. For games I was at someone else's, but I don't know the name of him. He was good too if I remember correctly)

N/A.

The exercise sessions were really great. Easy to follow and absolutely necessary to understand the material. Respect to handle such a great class that well (y).

Very friendly at the oral examinations, adapted easily to more individual solutions.

Just keep on doing what you do with motivation :).

Patient and helpful.

Don't know either

No opinion.

awesome

HMM 2: Very good job! Felt relaxed and there were good discussions. The only part I had trouble understanding was the last example (speech recognition).

-

She is a nice lady and tries to help us to the utmost. Her HMM exercise needs to explain the concept more.

Perhaps a bit too nice during the homework presentations. We had studied a lot before the presentation because we had heard that another TA had asked very specific questions about how the different HMM algorithms worked, but for our presentation we only had to present our solution in a general way. But it might have been the other TA that had gone a bit overboard with the presentation.

Speak louder ;-) good explanations

N/A

Please do not tell students to "please shut up" during exercises, there are nicer ways of going about doing this, even if the students are being obnoxious.

Never had her.

I did my presentation with Judith and she was really good in clarifying things.

She could not finished the exercise about HMM because she had not any idea about how to do it.

26 have answered of 301 (8%)

Constructive feedback to Didrik as a TA.

Text answers:

Did not interact with.

Good feedback during homework presentations and tries to explain what improvements that could be done.
Very focused when it comes to learning.

Nice and good at explaining.

Please speak a bit louder and faster. Very helpful for HW2.

Very helpful! You take time to listen to the questions and help. I mostly met you in help sessions where we could be stuck on some theoretical problem. We always went a way with information that might not had been fully understood at the help session but got us thinking a while afterwards. I believe this has been one of the most helpful ways of learning and the main reason I attended the help sessions.

-

-

Good feedback and help at help session for HW2. Could do more tutorials, I like the way he teaches.

N/A.

Dont know u

Great and constructive critique, coupled with better understanding after presenting the assignment. A++.

gave us some decent food for thought when we were stuck with HW1

-

I like his helpful nature. He tries to open up to the students from his end which is quite nice.

N/A

Never had him.

16 have answered of 301 (5%)

Constructive feedback to Fabian as a TA.

Text answers:

Did not interact with.

-

-

-

-

Didn't really get to talk to him.

N/A.

Dont know u

No opinion.

-

Straight-forward guy. Understands the students and their needs.

N/A

Got a bit of help from Fabian, who was more than willing to go to a large extent helping, much appreciated.

Very good at clarifying Akshaya's weird responses on the forum :>

Never had him.

15 have answered of 301 (4%)

Constructive feedback to Benjamin as a TA.

Text answers:

Did not interact with.

-

Nice guy. Enjoyed him.

-

Great work during the help sessions.

Really good at explaining, took his time

Keep it up!

-

.....

Didn't really get to talk to him.

.....

Best tutorial ever!

.....

N/A.

.....

Dont know u

.....

very good

.....

No opinion.

.....

-

.....

Great. Very calm, understanding, patient. Very good at the tutorial. I highly recommend him! :P

.....

Very helpful guy. Tries to find out the root of the problem and explains in the best possible way.

.....

Than you for your usefuls hints and programming advice.

.....

N/A

.....

Very nice to talk to and we felt very good when presenting our work to Benjamin.

.....

Never had him.

.....

Toppen! Älskar jag honom.

.....

22 have answered of 301 (7%)

at the same time a more transparent system, where it was more clear what a certain grade actually corresponded to.

- Less emphasis on report writing in the project
 - This worked quite well, with less time on the writing which is practiced in many other courses
- Provided students with an HMM implementation that could be used for HW2.
 - This unfortunately had the opposite effect of what was intended for most students. Instead of getting a better understanding of HMM by being able to experiment with a working implementation from the start and not spending time implementing it, many used it as a blackbox and tested different functions until one seemed to solve the problem. This resulted in less understanding.
- Quizzes on more topics
 - We provided a quiz for almost all topics taught in the course to ensure that we examine all aspects of it. Topics covered in guest lectures were not examined.
- Oral examination of HW1 and HW2
 - Previous years we have been relying on kattis to assess solutions and grading was based purely on performance. This year, every student had to present HW1 and HW2 to show that they had an understanding that matched the performance.
- Ethics component
 - We had a lecture on ethics and students wrote an essay on ethics regarding the impact of AI on the future job market and some other aspect of choice. Mostly nice essays, but the high volume meant that the feedback was of low quality as it was provided by the course responsible alone.

Grading:

A criteria based grading scheme was used. The Quizzes and the Essay were only graded Pass/Fail. The final grade was based on the grade on HW1, HW2 and the project. Assessment tasks had criteria for grades E, C and A and levels in between were awarded in cases where not all but some requirements were fulfilled at one level. As the project was carried out in groups and the influence of a single person on the grade is less the grade was given as an interval E-C or C-A. The final grade was the minimum of that from HW1 and HW2 and the one from the project were E-C counted as C and C-A counted as A. The interval grading for the project was intended to relieve some pressure. However, the result was also that many discussions on the project came to be about "what the minimum requirement was for being inside the C-A bracket.

Homework assignments: Like before the homework assignments focused on implementation and were corrected automatically by the course portal system. As mentioned before, this year we followed this up with an oral examination.

Lectures:

- Gabriel Skantze gave an invited lecture on the dialogue system work at TMH
- Stefan Carlsson and Hossein Azizpour gave an invited lecture on deep learning
- Danica Kragic gave an invited lecture on robotics and computer vision
- Johannes gave lectures on Logic and Planning
- Patric gave the remaining lectures

Planned changes:

- Reduce number of deadlines. Instead of one deadline per quiz use only one deadline at the end and treat this as a replacement for the written exam.
- Make project optional and only for higher grades.
- Require students to implement HMM from scratch again
- Restructure the homework assignment so that it more clear what the different grades correspond to with ore guidance for the lower grades.
- Vary the length of presentation slots depending on the grade aimed for. Check that the requirement at E level are met is usually faster than those at A level.
- Use peer-review for the ethics essay t generate better and faster feedback