

Informatics Student Course Feedback 2017/18

<http://www.inf.ed.ac.uk/teaching/surveys/2017-18>

This report contains feedback from students about a course taught in the School of Informatics during the 2017/18 academic year, in response to the following questions:

- What would you say to students interested in taking this course?
- What did you find most valuable about the course?
- What improvements, if any, would you make to the course?
- Please add any other comments you have about workshops and tutors

Each course organiser receives this report as well as statistics on multiple-choice responses. All these reports, together with student feedback about individual members of teaching staff, are collected and sent to the Director of Learning and Teaching.

Please note that these are personal responses from individual students: some courses only have a few responses and a small sample can be unrepresentative.

Stereotyping and bias, especially unconscious bias, is a serious concern in any survey gathering personal responses. All students received the rubric below before completing the surveys, and you can read a brief introduction to issues of unconscious bias on the university web pages at <http://edin.ac/2iypZBv>

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Rubric given to all students taking the end-of-course feedback survey

We value your opinions on the courses you take here at the University, as they allow us to shape future delivery and development. We welcome constructive comments about your courses, whether positive or negative, and ask you to give details about any issues in order to help the course organiser to understand and address them.

We encourage you to be aware of the potential for bias in the completion of these questionnaires, so we have developed resources which may be helpful to you:

- Equality, Diversity and Unconscious Bias (<http://edin.ac/2iypZBv>)

You also have a responsibility to provide feedback in a manner which does not breach the University's Dignity and Respect Policy:

- University of Edinburgh Dignity and Respect Policy (<http://edin.ac/1Cq0VZY>)

The results of the questionnaires will never be analysed in a way that seeks to identify individual students from their responses. However, should you wish to remain anonymous, please do not identify yourself in your answers to the survey questionnaire implicitly or explicitly.

Comments Report

What advice would you give to a student taking this course in future?

- Be prepared for a lot of self-study.
- Be prepared to learn on your own and definitely check Coursera for a very similar course. Also do all the labs and coursework in a timely manner and studying for the exam will be a piece of cake.
- Coursework -- THEY ARE INTENSE. Probably take much longer than they should for each coursework worth 12.5% of the grade. Start somewhat early, otherwise it will be intense.
If you start early for the coursework, then you get to understand all topics properly. There is a lot of help out there on the internet. If you do not understand a topic, google it and people usually have explained all issues/topics properly giving examples. The internet is filled with documentation and examples.
- Definitely a demanding course but exciting and lets you practice all the interesting stuff you learned.
- Definitely take it as it's a good introduction to machine learning.
- Do the labs before the lab time. Start the assignments as soon as they're out. Pretend they're due a week earlier so you can get answers to your piazza questions. When in doubt, ignore the advice and hints and do what works. Don't try to construct extra content in the end for those 70+ grades, just investigate things that seem weird to you as you go along.
- Doing the labs is very important.
- Go out on the internet and explore! There's a whole world out there of machine learning and python resources.
- Go to the tutorials. The labs help in completing the assignments.
- If the class is still reverse-lecture style, don't take it.
- If you want to learn about Machine Learning, don't take this course. Take it if you want to know how to use Scikit-Learn and Pandas in Python. You will neither learn much about the background behind algorithms nor implement them, but just apply them in a couple of lines of code.
However, coursework takes a lot of time and should not be underestimated.
- If you want, you can do this course before the semester even starts. This will ease your workload.
- Is a good introductory course. However, expect to spend a lot of time on the assignments.
- It is a fast paced course. Make sure you know some machine learning before getting into this course.
- It's a great practical course for ML.
- Keep up with the lectures. They provide great insights to the course.
- However, more important are the labs. They're very useful to prepare for the coursework.
- Make sure you allocate enough time to study for this module: 20 credits literally means double the amount of work you would have to put in for a 10 credits module. Don't be fooled by the fact that it's called 'Introductory...' it does require a background in programming and maths
- Start early with the assignments, watch the lectures on time.
- Start work on labs and assignments as soon as they are released.
Don't fall behind at all cost.
- Stay on top of the lecture videos & take time to engage with the labs.
- Take that serious. It's a very tough and busy lecture LOL.
- Take the soft deadlines seriously, it's the only way.
- The course is online without a book, which can be a disadvantage to some. However the course is very fun.
- This is a highly demanding course (lots of lectures & coursework) but it's not super hard if you start things early, and it really builds a foundation of understanding of machine learning algorithms.

Comments Report

What advice would you give to a student taking this course in future? (continued)

- Try to keep up with the course step although facing a lot of deadlines.
And try to understand the codes part, but not just copy them from the manual.
- Try to submit in time for the soft deadlines, so that you will not be short of time. The assignments do take their time.
- Very large assignments be careful if you decide to take it, because it will take time. The tutorials are useless because the tutors are unclear, they cannot even write properly the explanations of the exercises in the whiteboard. Nigel Goddard and James Owern, are not helpful and unreachable outside the class, the former never reply, James sends you to piazza and then never reply (maybe he's so busy with his job that he cannot do his job) basically you are alone with Google. The good things are Victor Labrenko's videos, labs and the technology used in the course (e.g. sklearn has an extremely well written documentation, with helpful examples), however when I leaved my country I expected more for a £29,100 fee.
- Y-It's true that you can just watch the course videos yourself or otherwise learn this stuff on your own. However, this course was still very good and I by no means regret taking it.
- Please prepare well before the lectures or student meetings.

Comments Report

What did you find most valuable about the course?

- A lot of well-explained theory. Tutorials were also very useful. Labs and assignments were broken down into small steps which really helps.
- Abstractions between the topics.
- Getting an overview on the topic.
- Great assignments and labs; very well put together, interesting topics and with a nice joke here and there. The video lectures were useful.
- Hard to say.
- I could do the whole thing from home. That's pretty cool.
- I liked having the videos of the lectures. It enabled me to go through some things a few times.
- I really liked how they introduced programming in Python and how to compute machine learning concepts in it step by step. I also found the course interesting.
- It gave us an overview of Machine Learning
- It's well organised and the coursework was very clear
- Labs and assignments are helpful for understanding key concepts.
- Learning a lot of different ML techniques to have a general overview
- Methods in machine learning.
- Practical experience on ML in labs and coursework projects.
- The Labs!!! Also Piazza, the videos, the great commitment of the instructors to answer questions online
- The amount of hands-on experience. It was really 'applied'. Even more than 50% of the credits could be about coursework :-)
- The assignments and labs were practical and well-structured.
- The assignments were a great way of learning the practice of the content and forcing a reconciliation of the theory of how the models work with their implementations.
- The combination of lectures and labs are perfect.
- The courseworks are very good and Piazza forum is very active.
- The courseworks were wonderful for actually getting some practice and implementing the concepts, I really felt like I was able to understand the different components/what was used for what reason. The labs as well as the assignments were well organised and
- The effort that went into making labs and assignments fun.
- The inverted classroom style worked really well for me. The lectures were clear and enjoyable. This course stimulated my interest in the subject and the lecturers' enthusiasm was contagious.
- The labs and the coursework
- The labs were helpful when it came to preparing for the assignments.
- The online video of Victor
- The online videos were clear and helpful. The lab assignments were useful to my learning. The course assignments were helpful for learning.
- The quality of the assignments and the recorded lectures.
- The technology (python) that they selected for the course and the practical part was good and relevant for preparing students to real life. Also, the fact that the lectures were recorded helped to "understand" the topics covered in the course.
- The tutorials & labs were most valuable in giving a clearer, more in-depth understanding & familiarity with the material.
- The use of notebooks for the labs was really helpful in cementing my understanding of the material in a really efficient way
Tutorials, labs, videos.

Comments Report

What did you find most valuable about the course? (continued)

- We know more about what is ML
- question and answering

Comments Report

What improvements, if any, would you make to the course?

- The videos are a little bit too much but it might be because it is a 20-credit course. And sometimes it is not easy to understand the contents on the videos. Maybe transfer to physical lecture would be better.
- - have a book - have lecture notes Personally I do not learn best from watching lectures, I wish there were more ways to study this course.
- 1. Briefly going through the key concepts for each topic in lectures would still be helpful. 2. Providing some written materials for each topic as references would be helpful.
- Definitely abandon the reverse lecture format. The recorded lectures are an absolute bore to sit through, especially because they can't be watched at double speed. Additionally, in the life of a busy uni student, making time to watch a video lecture is always going to be last on my priority list so I ended up falling behind on the video lectures and made it to about week 7 in the course without actually learning any of the material (even though I still went to the 'lectures' that Professor Goddard held). This should not be the case for a course I am paying money to take, I should go to lectures to learn the material and take time outside of lectures to reinforce my learning. I shouldn't have to devote an additional 3-5 hours of my free time in a week to watch the lectures for a course.
- Feedback to assignments structured in separate documents.
- Focus more on the theory and background. Currently most of the course is focused on how to use sklearn/python for machine learning -- not even implementing the algorithms ourselves! I can do this myself in an afternoon by reading the API documentation -- the course shouldn't teach about usage, but about the theory behind the algorithms. I would like to learn more about *why* we choose certain algorithms, do the math behind it, some proofs and calculations. This is covered less than superficial. Also, the video quality is bad at times, and the "real" lectures don't help with understanding -- Nigel just presents one or two trivial examples without going into more details.
- I am not yet convinced by this inverted learning approach. Is it better than the traditional approach of teaching?
- I don't love the flipped classroom style, especially because many class meetings were cancelled. I wish the tutorial assignments had more to do with the exam questions. The assignments were VERY difficult. I don't think it's fair for people who have no python experience, because the instructions are very vague sometimes.
- I would have liked the answers to the tutorials being posted online.
- I would have liked to have more clarity on what level of detail we need to know for the exam in terms of deriving certain techniques versus simply understanding how they work and why.
- It would be good if the video lectures/slides could be published a bit earlier.
- Lectures had been a bit unhelpful. I think giving a challenge to the students in an inverted style classroom is appropriate and helpful.
- Make the lectures more interactive (see andrew ng course on coursera), and allow them to be more practical first by giving you some exercises to work on your own to learn how to use each concept before diving into the dense and heavy mathematical aspects of each concept.
- More detailed feedback on the assignments. I'm still not sure what was expected as an answer to some questions. Although my overall results were good, poor marks on some questions suggest my answer was incomplete and I still don't know what to do if I needed to improve it. Assignments - I feel that there is a very fine line between doing great (> 70%) and failing completely, although I admit I don't have any suggestions on how to improve this.
- More problems for exam preparation would be useful. Also, having tutorials before labs would be better.
- More tutorials or longer tutorial sessions. The 1h slots were really too short even for the provided tutorial problem sheets.
- Personally, I don't like to watch online lectures.

Comments Report

What improvements, if any, would you make to the course? (continued)

- Please teach us in class meetings not only online.
- Re-record the videos. Lecture recordings are not suitable as a primary learning source. Lecturers would often refer to things on the slides using their hand or a laser pointer which is not visible on the videos and it's difficult to keep track of what the lecturer is referring to. Moreover, videos can be way more effective if they are meant to be watched at home from the beginning. I would also explain SVMs differently. Perhaps start with the intuitive idea for the simple case (data linearly separable) and then go to the maths and more complex cases rather than starting with weird formulas and then eventually deriving what is intuitively obvious.
- Record the lectures in a more engaging manner and explain more than what is written on the slides. I found some of the lectures very dry and not offering any extra explanations that was not already on the slides.
- Sometimes the assignments could have been more challenging but less time consuming.
- The assignments were so large that I did not have enough time for watching and reviewing in detail all the videos. Having large assignments, can't let you focus on the theoretical section of the course. It should be 60% coursework and 40 examination.
- The courseworks are very long and are marked very strictly (maximum marks are only given if you go beyond what is asked, rather than giving the correct answer).
- The different exercises are too dependent on each other!
- The feedback on assignments was generally poor. I understand that there are many people taking this course, but one of the core parts of learning is finding out what you did wrong. It would be very useful if the videos were available for download. There were a few times this term where I was travelling, and it would have been a good time to spend revising the course content, which I was unable to do without internet access.
- The inverted classroom format was not a great way of running the course. In particular, in a 200 person lecture theatre it feels incredibly awkward to be asking questions. The online lectures were clear if a bit slow. Answers on piazza were a mixed bag. It felt like there was an inconsistent policy of how much detail or help different TAs/lecturers were willing to give.
- The lecturer should be clearer and louder in his recordings.
- The lectures need to be restructured. The physical lectures are not helpful and the video content is too much. It is very hard to keep the pace in the videos throughout the semester.
- The lectures not just to be class meetings but lectures too
- The quizzes online were often very confusing and did not especially increase my understanding. More practice problems like those in the tutorial would have been very useful. The length of time it took to complete the course assignments was very unbalanced. More balanced assignments would be preferred. The lab sessions with the tutors were not particularly helpful. Though the labs themselves were.
- The video lecture format is frustrating. I'd like to see an actual lectures in addition to the current course meetings.
- hope that the lecturer could teach more concentrated
- The timetable is too flexible and sometimes we don't know whether there is a class meeting or not.

Comments Report

Please add any other comments you have about workshops and tutors

- Great work of James Owers!! I would have liked to see a few female tutors (I went to a few different tutorials and the tutors I met were all male). As for the forum, I found it great how many students and instructors were extremely willing to help, and gave great answers, and were very respectful and helpful even if a question seemed "trivial" or was a duplicate, and I always treated other questions like that as well. I noticed though that one of the instructors (no need to name him, but maybe everyone can take this criticism seriously for the future) would sometimes give answers that to me sounded a bit condescending (e.g., including a let-me-google-it-for-you link - I love sending these links to people but I think this is the wrong place for it). Even though these were not my own questions, I felt like this was creating a less friendly atmosphere, and it is exactly the kind of thing I dislike about forums like Stackoverflow (even though it is a great resource), where people have a very strict way of downvoting and discrediting questions not adhering to a specific standard, which makes it hard to enter the community for someone new (like me). I find it great that UoE has many female informatics students, but I have a feeling that in general that is the kind of thing that discourages young women from going into computer programming.
- I sometimes felt the explanations of the tutor too complicated. Sometimes the maths could have been kept easier for this introductory course.
- It was good to go through the problems manually to understand how the algorithms worked and their nuances.
- James Owers is awesome.
- Lab sessions were not especially helpful.
- Loved the labs.
- More tutorials.
- My tutor would simply go over the answers or the math behind them without explaining any of the course concepts that help one find an answer. As a result tutorials did pretty much nothing to actually help my understanding of the course concepts.
- My tutor, George, really helped me understand the concepts! He is good in explaining and did take the time to answer all upcoming questions. He was well organised!
- The labs are well-organised and useful.
- The labs were not well organised. The lab tutors were not able to advise and help us effectively.
- The tutor is very helpful!
- The tutor is very patient and gentle. Love you very much.
- The worst part of the course, at least for me were the tutorials. The tutors, are bad organized and unclear in the whiteboard, they literally write scrawls (then they say, ohh this is too easy) which makes impossible to take notes about the exercises in the problem sheet. Also, they were bad for managing the time of the tutorial. The School of Informatics, should hire people who actually know how to give tutorials.
- There wasn't enough time to do the labs in the lab sessions. Realistically I think it's better to tell people to attempt the labs before arriving until they hit a snag, and then get help for them at the lab sessions.
- Too little connection between the theoretical video lectures, practical assignments, and tutorial materials.
- Tutor was not very engaging
- Tutorials were fine but far too easy and too few. Labs are not useful at all -- the "lab tutors" don't present anything, it is more like a fixed time to do the labs.
- With such little time (short tutorial sessions), the tutors should really prioritise and be good at explaining stuff swiftly. Our tutor often spent too much time on things she herself was probably confused by, and sometimes she didn't understand the questions from us and spent much time answering something different.
- Please change the questions to simpler one