

College of Engineering, Cornell University
Course Evaluation Response Summary
Semester: Fall 2015 **Course Owner: CS**
Course: CS 5780 Lec 1 **CID: 12716**
Instructor: Weinberger
189 Responses, 286 Enrolled, 66.08% Response

Question	Mean	Count	1	2	3	4	5
1. How valuable were the assigned readings? 1=taught me little; 5=extremely educational	4.27	142	1	6	21	39	75
2. How valuable were the homework and/or computer assignments? 1=taught me little; 5=extremely educational	4.37	186	1	2	24	59	100
3. How valuable were the laboratories? 1=taught me little; 5=extremely educational	4.45	53	0	2	6	11	34
4. Rate the examinations in this course as a test of your knowledge. 1=too easy, not adequate; 3=adequate; 5=too difficult, not a fair test	3.70	183	0	4	77	72	30
5. Did the lecturer stimulate your interest in the subject? 1=not at all; 5=stimulated great interest, inspired independent effort	4.59	185	1	0	10	52	122
6. Was the lecture presentation organized and clear? 1=disorganized and unclear; 5=very organized and lucid	4.42	186	0	3	22	55	106
7. Was the lecturer willing and able to help you overcome difficulties? 1=was of no help; 5=was very helpful	4.48	168	0	2	18	46	102
8. Rate the overall teaching effectiveness of your lecturer compared to others at Cornell. 1=worse than average; 5=much better than average	4.51	186	0	2	13	59	112
9. Was the recitation organized and clear? 1=not at all; 5=very organized, lucid	4.37	65	0	1	12	14	38
10. Was the recitation instructor willing and available to help you overcome difficulties? 1=was of no help; 5=was very helpful	4.39	67	0	2	10	15	40
11. How would you rate the recitation instructor's command of the course material? 1=poor command of material; 5=excellent command of material	4.57	69	0	1	6	15	47
12. What was the overall quality of the recitations and your recitation instructor? 1=worse than average; 5=much better than average	4.29	62	0	2	12	14	34
13. Overall, how does course compare with other technical courses you've taken at Cornell? 1=poorly, not educational; 5=excellently, extremely educational	4.46	181	0	3	18	52	108
14. How many hours each week did you spend on this course outside of class/lab/recitation? 1=less than 2; 2=(2-4); 3=(5-8); 4=(9-15); 5=16 or more	3.40	185	1	21	90	49	24
15. How prepared were you for this course? 1=overprepared, it repeated material; 5=underprepared, course assumed unfamiliar knowledge	3.54	184	1	14	88	46	35
16. Was the code of academic integrity maintained in this course? 1=no, often violated; 5=yes, well maintained	4.77	184	1	0	9	21	153
17. Most important reason for taking this course? 1=field or major requires it; 2=prerequisite for further courses of interest; 3=interest in subject matter; 4=reputation of the course; 5=reputation of the instructor	--	185	10	5	140	17	13

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1. Please comment on the strengths of any aspect of this course (e.g., the lecture, recitation, laboratory, computing, text, homeworks, examinations or course content).

148117: By far one of the best courses I ever took, I attribute this entirely to prof. Weinberger

148753: Weinberger's witty comments and interesting demos made lecture interesting.

148798: Interesting demos in class, projects are easy and straight forward, the amount of homework is pretty legit.

I gained some good intuitions and interests from Professor's lecture.

148831: professor is superb at lecturing; his lectures are incredibly educational, enlightening, and entertaining, and he stimulates great interest in the subject matter. I'm considering taking other courses of his just because he teaches them, doesn't matter what the topic is.

148947: Very interesting lectures, very interesting lecturer. Great demos.

149073: Killian is fantastic in lecture. Fully knows what he is talking about and can answer all questions. He appears very enthusiastic about the subject and I am very happy how this course turned out. Computer projects were of good difficulty, Piazza is a good resource, and the auto-grader was a good idea.

In class demos are the best! Visuals help after half a lecture of derivations.

149282: 1.The project for leaderboard
2.The teaching style

149457: Project Auto-grading -- Staff put a lot of effort into designing an auto-grader. This was great because we could instantaneously submit our code and receive a grade.

Homeworks -- the homeworks were leniently graded, which allowed students to actually collaborate and not worry too much about violating academic integrity, since the homeworks were graded on completion and the whole point was that students were encouraged to work in large groups. This reduced stress and helped with actual learning.

149486: Excellent lectures; Killian is hilarious and engaging. Projects really help the material click in a practical sense; homeworks help my understanding of the theory. I'm very happy with the grading in the class - it's good that the homework is collaborative and not graded for accuracy because I think students learn more and cheating is de incentivized.

149561: One of the best courses I've taken. The programming assignments were very helpful in understanding the concepts and were very well organized. In addition, the class demos prepared by the professor were great and provided useful insight into the topics.

149720: The demos were really helpful. Please make them publicly available if possible.

150045: The lecture covers interesting topics in Machine Learning, and the professor has a humorous style in presenting materials. The students are motivated in studying the topics. Overall, it is a great class.

150282: Assignments were helpful in solidifying concepts

150362: The lecture express the ideas and shows the projects vividly. The assignments are interesting

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150519: The professor is very humorous. He can keep the students focused on the topic for a long time. And the course content is well-organized and quite informative. The homework is also well-designed, and students can learn a lot from doing them.

150529: The best part is Kilian's lectures. I think he presents the information in a very clear and engaging way. The projects/homeworks are very straightforward and fun! And Kilian provided excellent resources for studying for his exam.

150706: Lectures are often interesting. Five people homework group is a good way to learn.

150792: Very useful topics in computer science.

151053: Very interesting professor and lectures. Professor gauges the ability of the class to grasp a subject matter pretty well. Very interesting demos. Good projects

151692: Kilian is cool

151785: I really appreciated that we were given boilerplate code (e.g. vectorization scripts, tests, etc.) for our assignments. It allowed us to focus more on the machine learning components.

Keep MLunch. I really appreciated getting to meet Kilian

Kilian is a great teacher, and makes lecture fun

151992: Kilian was an amazing lecturer. They were always entertaining and never boring, and for the majority of the time, he taught the material extremely well. He was definitely the most engaging professor I had this semester. The practice material for the prelim was great as well. The lunch with Kilian was great as well.

152393: Prof. Weinberger is very humour and he can explain the concepts very clearly.

152554: Very engaging lectures, excellent demonstrations

152848: Excellent!

152850: The course was awesome in every way including the demos in class, the projects, the lectures, the readings and the homework. The leaderboard was the best part of the class. Prof. Kilian is amazing.

152851: Kilian is a great lecturer

152852: Lecture

152854: The materials and the way they are presented are really awesome!!

152856: Kilian is an amazing teacher. Over the summer I saw one of his videos on youtube, so right away I knew this was a great class to take. Cornell obviously made a great decision.

152864: Loved the lectures and demonstrations.

152890: The lectures are very organized and Killiam explained the materials very clearly. The demos are very interesting and helpful for understanding the concepts. Killian taught this course in a very inspiring way and this is definitely the best course I have taken at Cornell.

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152906: Really liked the online notes.

152919: The lectures were fun and interesting. The projects are set up such that they aren't insanely difficult yet helps with the understanding of the material. Homeworks are a bit difficult but since group work is allowed it promoted discussion. Overall I love everything about this class. Especially how passionate Killian is about machine learning and how fun and relatable to the real world he makes the lectures with his demos.

152920: Killian is the best professor I've ever had.

152923: The professor was very good at lecturing and teaching! One of the best classes I taken at Cornell!

152942: Excellent:

- lecture format (self-contained handouts on each topic, in class Q/A, demos)
- Kilian's teaching style (enthusiastic, entertaining, inspired interest in material, made material (largely) accessible)

Good:

- programming assignments; generally they were helpful in teaching the concepts, but using octave was challenging due to a lack of documentation, and the skeletons for the scripts sometimes made the programming tasks too much about following matrix algebra instructions, rather than really understanding the material. I don't know if it is a realistic objective of the class, but I don't feel adequately prepared to implement most of the algorithms from the class on my own. I do however feel very confident I can understand how/why they are used in practice.
-

152985: The demos are extremely helpful. The sense of humor and the overflowing excitement of the professor also helped making the course very exciting, not to mention the obvious solid knowledge of the professor.

The frequency with which the professor asked if we had questions and checked if the class was following were also really helpful.

Overall, this class made me want to study more machine learning, not only because the contents of this class were interesting but also because of the professor himself.

153041: I liked the projects. They weren't too long but solidified the course material.

153078: Very good. Kilian is a really good lecturer!

153092: Really interesting material and an enthusiastic Professor. The subject itself is fascinating enough to carry its own weight, but the lectures definitely went above and beyond.

153094: The professor was the best I've ever had at grabbing and holding onto the class' attention, and making sure that as many people as possible are following what is being said, even when the material is very technical. His extensive use of visualizations and demos helped a lot to this end.

153144: Possibly THE best course I have taken in my four years at Cornell. Lectures with Kilian were something I would look forward to - they are fun and easy to pay attention to. I can tell that the professor is really passionate about teaching, and is good at keeping the class under his control. Project auto-grading system is for the most part well done and allows for a fair chance of getting a good grade.

The prereq test was a really good idea and I wish other classes would implement it as well.

153200: lectures were entertaining, homeworks were practical

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153234: Really enjoyed the homeworks, the demo's in class, the autograder, and Kilian's candid way of lecturing.

153250: Kilian is a very nice, funny guy and this makes students more interested in the class.

153329: Killian is the best instructor I have ever met in Cornell. The course is flawless in every aspect. I only wish Cornell can have more professors like him.

153347: Professor was great. Really appreciate him typing up the notes.

153387: i really enjoyed the lecture and kilian's jokes

the projects were meh

the homeworks were good because of group learning

153467: Exams are hard; projects are great the way they are, autograder helps you learn!!! Much better way than many other CS classes are taught at this school...

153560: Lecture was engaging - demos were great

153577: Professor Weinberger's in class examples and demos of the course material that we learned were not only highly informative but also entertaining. We were able to see real world applications of the course material and they helped ground my understanding of machine learning.

153598: The Professor did an awesome job at keeping the attention of the class. I wouldn't ever feel like skipping a class for any reason whatsoever. Th subject is tough without an adequate background. But the projects helped understand it better.

153611: Strength: Advanced and currently in demand course

154115: Killian is amazing. Every professor should learn to teach like him. Job well done sir.

154334: The homework projects were very interesting and I liked doing them. I specifically like that I learned how/when/where to use machine learning algorithms.

154351: Homework really helped understanding the materials.

154514: Lectures were engaging, and the format of the projects were fun.

154576: Great demonstrations. Very helpful

154618: Very engaging lectures. Learned a lot from this course. Homeworks were helpful. Programming assignments were a great learning exercise. Over all learned a lot from this course.

154665: Great lectures, interesting and great demos.

154758: The lecture was very interesting.The lecturer was very helpful.

154948: The professor was incredibly engaging and relatable. The lectures were fun and interesting. The demos were VERY useful for understanding.

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154979: Auto grading assignments was great.

154991: Lectures were engaging and very educational.

155140: Lectures were incredibly stimulating, interesting, and well structured. Homework and projects were also helpful and fun.

155161: Killian is awesome!
The course content is really interesting, and we always have this duality between theory part and implementation part, for actually applying the algorithms. The lectures are dynamic and well illustrated by demos. Killian's encourage teamwork and tries to have everyone following is presentation, which is valuable.
Written homeworks are also useful for taking the time of thinking about the mathematical ground of the course.

My favorite course of this semester!

155208: Killian is super nice and funny!!
I love his course.
I mean Machine learning is kind of difficult and complicated, but Killian definitely made it more interesting.

155278: Kilian has a great personality and we all love him. His lectures are extremely engaging and something I looked forward to each week. He was able to make some of the more difficult material very digestible and had good analogies on hand to help us get it. His humor is on point; humor is one of the best mediums through which to teach. I really hope I may get Kilian again as a professor in the future.

155342: really great course, one of the best lecturers I have had at Cornell

155403: The typed notes were extremely well written.

Also Kilian is amazing at lecturing, and maintains an excellent balance between theory and demonstrations/applications to keep the class both very interesting and very informative and meaningful.

155644: Interesting material

155714: Coding assignments were highly educational and fun. Lectures were very engaging and demonstrations were excellent.

155773: Lecture is interesting and helpful. Assignments and projects all help establish a solid basis.

155776: The lectures were very well done, I GREATLY appreciated the "talk to your neighbor" "quizes" during the lectures, as well as the "raise your hand if you're still with me" segments. Overall, I very much enjoyed Prof. Weinberger's teaching style, and thought it was very refreshing and a stimulating learning environment.

155828: Professor was AMAZING. Never a boring moment in lecture. He presented the material incredibly clearly, inserting just the right amount of jokes, and was willing to answer any questions people had.

155878: Very organized lecture and demo.

155916: More TA office hours.

155966: Really liked how you had html type ups of the lecture notes. Also enjoyed that you gave out lecture notes

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every class since its easier to follow whats going on at your own pace with the lecture notes and having context for whats being written on the board. Also a fan of the autograder.

155992: Kilian will show us a demo when he delivers new knowledge, which I think is very useful.

156002: Lectures were amazing. Kilian is a fantastic professor with a great sense of humour. While we may not understand a concept immediately, he will explain it again with an analogy or a metaphor, or he will explain it in more depth, and then it will make sense.

The programming assignments were extremely helpful in improving my understanding of the course material. Autograder accepting unlimited submissions, as well as the inclusion of test cases, significantly reduced pressure to get things right on the first try, so they were even more helpful to learning about the techniques/algorithms at my own pace.

156057: The lecture notes are very helpful.

156115: Lectures were well organized and fun. Real world examples were given every lecture. Awesome class!

156173: Great lecture content and homework.
Great lecture notes distribution for handwritten and HTML format both.

156192: The lecture is really helpful.
Professor will send out the paper lecture notes every time, and TA will provide a summary of lecture notes before or after the lecture notes immediately, and it is really helpful to catch up for the class.
Also, both the written homework and programming assignments are very good material to deep the understanding of lecture contents.

156580: - autograding assignments is immensely helpful and hugely stress-relieving
- projects & homework & grading (incl. exams) are all very fair

156919: The assignments and homework were geared toward our understanding of the material completely thanks to professor's consideration for us.

156999: Lecture was always informative. Assignments always relevant.

157063: The homework is helpful for me to drill down to the topics in lectures.

157067: The lectures were amazing, especially the little bits at the end. Loved the ML protest

157077: It was very well done.

157100: Professor Weinberger is a brilliant lecturer. He is truly able to explain complex concepts in a very simple and entertaining way. He is always able to answer any questions students may have. Written homeworks were very helpful to understanding mathematical concepts behind the topics discussed.

157202: Lectures were informative and generally interesting.

157440: Lectures were very entertaining and definitely drove interest in the subject matter

157562: Weinberger strikes a pretty good balance between math and intuition in explanations. He is good at answering real-world application questions.

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Working in groups on the written homework was very good for understanding.

157605: The coding projects are well designed. I truly understood the knowledge by implementing the math in codes. Professor plays tricks well.

157641: Prof. Weinberger is an amazing lecturer. If exams were just me reciting his thoughts, life would be perfect. Dang, I really wish we had Videonote.

157686: The course was excellent. When I look back, I feel I have learnt a lot of Machine learning in a short duration of 4 months. The projects were well organized, and helped learn the algorithms effectively.

157751: I enjoyed the fact that the projects were not too long.

157755: Great homework/project system that requires some work but lets students understand the course material better

157762: The energy that Kilian brought to the classroom

157765: I Loved that the homework did not count. The style of the class makes it more rewarding to actually do the homework than not to. The typed up html was also a blessing!

2. Please comment on the weaknesses of any aspect of this course (e.g., the lecture, recitation, laboratory, computing, text, homeworks, examinations or course content).

148117: Octave, the chosen programming language, was the greatest weakness. Maybe consider python?

148753: The course was way more about math and theory than what I was expecting.

148798: I really don't think the midterm exam was not quite a effective exam to test my understanding to the subject, some questions are somewhat abstract, and it was hard to find connections between our homeworks with the exam. Many students were trying to memorizing the questions from old exam without understanding the concepts behind each answer, and professor used some questions that is exactly the same as some questions on old exam. That will make more students trying to memorize without understanding the deep concepts. I can still clearly remember that from the second lecture of class, our professor taught us how inefficient and useless an memorized learning algorithm is - so does human being.

Also 25% weight on both midterm and final exam is not quite fair to evaluate students' overall results on this course, and is especially not fair to students who did really bad on the first exam.

148831: it would have been nice to have the final homework and project a little bit earlier, since realistically very few people will work over break and *every* class decides to have major things due the last week. also some of the projects have had tweaks and fixes made midway through the assignment, which can get confusing if you don't stay on top of everything.

148947: He went too fast at times and there didn't seem to be any particular structure to the class, just whatever the instructed decided to do. Also, very uneven distribution of work. Most of the work for this class seems to be due the last week of classes. This is unfair given drop deadlines.

149073: Did not like how the midterm turned out: too many T/F questions that nitpick about single details. Would have preferred more questions like the Perceptron question: reason about how the algorithm works out on a given dataset from start to finish. (I like dealing with numbers, not words). We'll see how the final goes.

Written homeworks were ok.

149282: 1.The handwriting haha

149457: Prereq Exam -- the pre-req exam was rather difficult, probably mostly so because it was a take-home exam. By that same token, I personally witnessed academic integrity being breached multiple times with students working in groups for the exam and sharing answers, despite obviously defeating the point of the exam.

It was too easy to do so, and I would not be surprised if many more students had done so. Aside from the obvious problems posed for those students themselves, this was problematic because it induced a lot of stress, personally, in being able to pass the exam knowing that there would be some arbitrary cut-off for enrollment. The Professor was very vague about the cut-off, so it was unclear for a while if the cut-off was going to be based on stack-ranking the students (in which case, cheating to boost points would have been detrimental to other qualified students who were on the cusp of the cut-off).

Mid-term -- I felt like the mid-term was intended to be a good test of knowledge by focusing on conceptual questions. But on the other hand, the lack of actual mathematical/derivation questions did not sufficiently target those aspects of understanding. Conceivably, being able to memorize tons of Machine learning tricks could have helped earn points.

149486: Killian's handwriting is poor and it's hard to read from the back of the lecture hall. Bigger and neater print please! Also typed lecture notes before lectures would be good.

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149720: Homework was tedious. If the instructor himself skipped the derivations because they are 'boring and tedious', why should we do them on a homework?

150045: The instructor's handwriting is terrible; in some sense, it influences the reading in lecture notes and notes on the blackboard. It causes much difficulty in learning new topics. It would be better if the instructor can provide printed notes before class rather than just randomly handwriting.

150282: Sometimes lectures were a little disorganized

150362: The projects are too restricted and exams are not hard enough to test our knowledge of this course

150519: The professor should spend less time on answering questions in class. Questions should go to Piazza instead.

150529: Probably the worst part of the class is feeling intimidated by how hard Kilian says the course is.

150706: Exams are very different from homework and lectures are sometimes hard to follow.

150792: Professor talks a bit fast and sometimes it is inaudible in the noisy environment.

151053: Too much math in some lectures which are hard to follow. Notation messy/inconsistent. Typed notes were great compared to handwritten notes. Homeworks were way too hard.

151231: I think this course should have a recitation section.

151785: We moved a little slowly in lecture for my taste.

151992: At times, this course felt too mathematical. Some of the derivations in class were extremely hard to follow and definitely required studying outside of class. But also sometimes, it felt like the math was stressed extremely hard in class but outside the homeworks (which, given their completion or not nature, it was easy to not take them that seriously), some of the proofs weren't ever used again. So as a student, it was hard to know whether we should really understand every proof and be able to derive them again, or if we should understand the big idea behind the proofs themselves and how they fit into the bigger picture of ML.

152393: Everything's fine!

152554: Programming assignments are too short. Written notes could be tidier

152850: None.

152851: Too many topics and assignments

152852: Homework, Project

152856: No weaknesses. While some students may complain that they want homework to be worth more.. the fact is that students can easily cheat on homework assignments.

Tests + Projects make it far more fair! (Projects can easily be checked for cheating).

152864: Projects were a bit too easy and homeworks should have counted more.

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152890: I wish the semester could be longer. And each section definitely should be longer!

152906: I wish all the assignments weren't crammed for the last couple weeks of class. The last couple of weeks are already super stressful and it doesn't help when so many assignments are due so late.

152919: None

152920: I wish class were twice as long.

152942: Weaknesses:

- Homework assignments were too challenging, and I felt like they did not really help me understand the algorithms on a practical level.
- Homework assignments were too long, and they did not sync up with the lectures and the projects. It might be more effective to have combined programming projects and shorter math assignments that are assigned and due at the same time.
- Although the lecture notes were adequate (the printed lecture notes helped immensely), I often wanted other background reading, but found the assigned textbooks and online references to not be helpful. I'm sure this is because the course taught very complicated topics at an unusually accessible level, but a textbook would have been helpful.
- Minor inconsistencies (like notation) in the lectures and notes; this occasionally made topics very difficult to understand. It would have helped me to have a clear definition of the variables used in the different derivations, and to have the same notation throughout the topic.

I also thought it would have been fun and insightful to have an open-ended project, where we are given the option to implement methods of our choice in a competition.

152985: The blackboard is not used very effectively, in the sense that organizing it better would make it easier for students to follow the oral explanation. Sometimes it felt almost as if the professor was trying to explain math with talk because it was hard to follow the blackboard and the notes. Talking slower would also make it easier to follow.

I found these classes from MIT to be really good paced and organized, although I know there's also the matter of different professors having different personalities. <https://www.youtube.com/watch?v=UHBmv7qCey4>

Sometimes it was a bit hard to understand what the homeworks were asking for (specially HW 3/4) and the fact the TA's hadn't seen it before made it hard to figure out.

Overall, the class was awesome! We know it's the first class the professor is teaching this class and I'm sure those difficulties will be overcome!

153060: Homeworks were horribly organized and often had minimal learning. Lots of time was spent debugging silly things like figuring out whether something was a row or column vector. Homework assignments were often poorly written and required questions to be asked for clarification, without which the problem could not be done.

153078: the hand written notes :)

153092: Extremely poorly run on the course staff side. TAs would cancel office hours with no warning right before deadlines. Even in this last week there are next to no office hours with no notice. The TAs don't exert effort to answer questions and often delegate to the answer key, therefore if they don't have the answer key, some are entirely unhelpful. This does not apply to all TAs, there are several who do an okay job, but no one stands out. Those who do not perform up to basic standard fall far below expectations. Frankly, it's disappointing.

This subject is very interesting and the course staff is entirely unable to foster any sense of curiosity. Please run it differently next time. Not everyone can get all the material on the first try. It's very clear this class is entirely new, so naturally some issues can be attributed to growing pains, but TAs should not complain about the course to the

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students. It's kind of discouraging.

I do believe the course staff is responsible for writing test cases. They're are horrible, if we're graded on these tests through an autograder and the test cases are inconsistent with the instructions and sometimes a latter part of the test cases, it's natural for students to feel frustration.

Also regarding the autograder, I do like the leaderboard and the idea in theory but one small bug can have consequences that are disproportionate with their severity.

I also do not like how all the weight ends up falling on the exams. It'd be nice if there were a little more distribution on the homework end of things. The homework (also written largely by course staff) can be way too vague and poorly worded.

I would like to note that I have met at least three quarters of the TAs. Of them, more than half were bad. I would list names but I do not want to unjustifiably accuse a TA that perhaps I have not met.

I think it would serve this course well for the professor to be harder on his course staff. I have never seen such a poorly run computer science course at Cornell.

153094: The overly-prescribed nature of the programming assignments made them feel too easy, and like I wasn't learning very much. Talking to other students, it sounded like peoples' primary difficulty in doing these assignments was a lack of knowledge of the Octave programming language, rather than any sort of deep confusion over the course material.

153144: Midterm is somewhat unfair - some questions are too sensitive to math errors when they should test concept knowledge.

153200: none

153234: It was pretty difficult to read the blackboard. Large classroom, complicated notation, dirty/chalky blackboard, plus handwriting. Having the notes helped some.

153250: There should be more recitations and numeric examples

153329: No weakness at all. I wish I could have the opportunity to take more courses from Killian,

153347: Project descriptions could have been more verbose. Sometimes it was difficult to understand what to do, or what data type the functions were supposed to return.

153387: the handwriting kilian...it killed me

hmmm...some of the material was hard towards the end, especially on CART

153560: Written homeworks often felt a bit too math heavy. I would have preferred more of a focus on things like algorithms and time complexity over pure math proofs and derivations.

153598: This subject simply must have video lectures. There is so much the Prof. teaches in class. If the subject is unfamiliar, it is difficult to wrap one's head around the concept without going over the lecture again. Video lectures would've really helped. The subject was too mathematical in parts. I understand that Machine Learning requires us to come with an adequate quant and statistical background. But a more detailed explanantion of the mathematical portions wouldve helped. The TA hours, though helpful for clearing doubts regarding the assignment, were not as useful to understand the subject.

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Course: CS 5780 Lec 1 **CID: 12716**
Instructor: Weinberger
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153611: Weakness: Good projects but small. Student doesn't have to do the entire thing. Half of the thing is already done. But at the same time, its difficult to have large projects considering the number of projects

154073: I notice for the 2nd half of the semester, the programming assignments were not organized/described as well as the previous assignments. The specifications are not clear and most of the time we spent on the programming assignment is not on understanding the course materials but on guessing which data structure to use, what format/dimensions the test cases expect, etc, which are not meaningful.

The same for the Piazza, in the later half of the course, a lot questions in piazza are not answered, especially questions about the course materials (not about the programming assignments).

The aforementioned is all about TAs, but I believe it is necessary to let Professor know so that he can encourage the TAs to work harder in the future.

154115: TAs canceling office hours with very little notice, but not much can be done about that.

154334: Autograder/partnering was not super great but everything was resolved in the end.

154351: Exams are very much about theory.
Grading is not very fair. Students bad at exams cannot make it up from good project scores.
Instructor's hand writing is an extremely critical problem.

154514: Homework assignments should have a group that is a multiple of 2 to facilitate group forming since projects are done in pairs. Otherwise, the course was great!

154758: 1. There was no video note, homeworks should be graded, assignments should have been better.

154948: The written homeworks were not very helpful and were a bit too large. Smaller individual homeworks would have been more helpful.

154979: Written homeworks being binary made them kind of pointless

154991: Written homework assignments helped me understand the material the most out of anything in the class, but there were only three of them. There should be more. I would be in favor of more written homeworks if there was a solution to how much time it takes to debug projects. To be clear, the course shouldn't just add more written homeworks to what it already is -- that would be too much.

155140: Homeworks were helpful, but I wish they had been graded. The type of work on the homework was very different than on the exams, so only grading the exams gave good test-takers an advantage in overall grade in the course.

155161: Sometimes, some typos are in the notes, and explanations are not that clear, but like everywhere right?

what is more annoying are mistakes in the automated tests of projects assignments, but hopefully they are not that frequent

155208: I think the TAs are not very good.
Sometimes we posted questions on Piazza, but nobody responded to it for a long time.

155278: Seeing as this was the first time Kilian taught the course at Cornell, it's understandable that there were going to be transitional difficulties in terms of a coursestaff unfamiliar with the projects and homeworks. It would have been nice to have the TAs go through some kind of ML bootcamp - I'm sure they would have served excellently under the

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same curriculum they had when they took the class, but they were vastly not competent to help with the demands of the brand-new curriculum - I suppose there was not as much overlap as they had hoped.

Piazza engagement from instructors was all but existent - this had the single pro that students had more opportunity to help each other, but most of us, if lost and confused, stayed lost and confused. (this was especially true with p7) Also, instructors didn't have access to hw solutions through which they could help us in office hours.

Also, with respect to projects, in the future always have the updates be applied with svn, instead of uploading corrected files to Piazza-> resources -> resources. As much as we use Piazza for the Q&A section, the other sections have a terrible UI/UX that makes finding files rather difficult.

tl;dr; improve course administration

155403: The handwritten notes were better in terms of content but often not as readily usable because of readability.

155644: Projects were not good testers of my understanding of the material

155714: Written homework assignments were interesting for supplementary knowledge but seemed inconsequential.

155776: Some of the homeworks seemed too structured, to the point where some functions one could guess the output given the matrix dimensions (i.e. some functions didn't enhance your knowledge of what you were doing to the vectorized code, just that the matrix inputs had to be multiplied and could only happen one way).

While I don't think there's an easy way to remedy this problem without making projects too difficult, I think maybe having two parts to the project-> a non-vectorized part (understanding `_why_` and `_what_` you are doing at the fundamental level) then proceeding to the vectorized part. That way, you could use the autograder to do a "sanity check" ensuring you not only can write the vectorized formulas but you understand what the vectorized formulas are actually doing.

155828: Projects tended to be far too easy (except for project 7 which had a HUGE time spike and blindsided many people). But the homeworks tended to balance this out.

155916: Homework could have more practical problems.

156002: Staff presence on Piazza could be significantly improved. That being said, it is Kilian's first semester here, so the course content has likely changed from previous semesters (and as a result, it makes sense if the TAs are not as well-prepared). That being said, the TAs should have an obligation to at least keep up with the material so that they can actually assist with assignments.

156057: It should include a big, open project at the final for practice. Students shall have more projects that are related to real problems.

156192: None

156431: The weakness of this course is that the course should provide more projects and other independent project that enable students use what they have learned to tackle with the real problems.

156580: - (not sure if counts as 'weakness') ended up never reading textbook or assigned readings
- getting Octave and everything set up at beginning of class was a little painful - ended up doing the whole class by SSHing into csug (= no visualizer or gui for anything)
- should emphasize where a VPN is or is not needed - had a scare using slip days over Thanksgiving break when it appeared that the autograder suddenly stopped accepting stuff out of nowhere, due to the VPN auto-disconnecting

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when leaving Cornell (had to manually refresh some stuff) and no indication that it was the VPN's fault - would have been screwed had not someone else had the same problem on and posted about it on Piazza. The errors I was getting strongly implied that the autograder's machine/server was down or something.

156919: The lecture I personally felt was done in fast pace, while other students thought the course progression was slow. So the professor couldn't do that much for improvement in the class and we were also confused a little bit.

156999: Due dates for homeworks could have been spaced better to give more time for each assignment.

157063: The lecture sometimes is a little too fast. Maybe it would be better if we can slow it down sometime when we have hard topics.

157067: Possibly more focus on written homeworks, and having them be graded instead of pass/fail. I thought they were more educational than the programming assignments. If I ever had a difficulty in a programming assignment, it was usually because of my lack of Octave knowledge than ML knowledge. I learned the most when I had a hard time solving a problem in the written homeworks.

157077: Great lectures.

157100: The programming assignments were quite simple and often were not extremely thought provoking on their own, but the challenges on the leaderboard allowed for deeper thought when time was not of the essence.

157440: Hard to get partial credit because often I couldn't even get the autograder to run until I had a 100

157562: Notation is wildly inconsistent. For example: capital and lowercase letters frequently exchanged, row vectors vs. column vectors are inconsistent, exponentiation used inconsistently to mean either elementwise or matrix multiplication, etc. These inconsistencies were replicated in and exacerbated by written homeworks. Written homeworks would be Last programming homework was disproportionately difficult and much of the time to work on it was during thanksgiving break.

157605: Professor's writing is terrible.
There isn't enough TA time or at least some TAs are not well prepared.

157641: It is the first year so there is not a lot of support for the material - TAs do not fully understand the assignments or really just aren't responsive, whether with office hours or Piazza. Homeworks and projects are hard and don't directly apply to the exams. ML is hard, but boy, I wish there was a final project instead of an exam so I didn't feel inadequate in data science after this course.

157686:
Wish there could be more projects on every algorithm learnt.

157751: A lot of complex topics deserve a bit more exploration.

157755: A bit fast paced?

157762: The coding projects didn't teach me much, and were easy to do without understanding the thing they were trying to teach.

157765: No problems.
