

Term	Summer, 2023 (202320)	Enrollment	107	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	107	Division	-
Cross Listed Sections	-	Responses	60	Department	Computer & Information Science
		Response Rate	56%	Subject	Computer and Information Science

Average Ratings						This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.50	3.50	3.50	-	0%	0%	15%	20%	65%		60
					0	0	9	12	39		
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.35	3.35	3.35	-	0%	2%	15%	30%	53%		60
					0	1	9	18	32		
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.63	2.63	2.63	-	0%	8%	31%	51%	10%		51
					0	4	16	26	5		
<b>4 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.22	3.22	3.22	-	0%	0%	24%	30%	46%		50
					0	0	12	15	23		
<b>5 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.29	3.29	3.29	-	0%	0%	22%	27%	51%		51
					0	0	11	14	26		
<b>6 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.06	3.06	3.06	-	2%	4%	14%	46%	34%		50
					1	2	7	23	17		
<b>7 Accessibility of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.06	3.06	3.06	-	4%	2%	14%	43%	37%		49
					2	1	7	21	18		
<b>8 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.25	3.25	3.25	-	0%	4%	18%	27%	51%		51
					0	2	9	14	26		
<b>9 I thought the course instruction prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.18	3.18	3.18	-	2%	2%	12%	45%	39%		51
					1	1	6	23	20		
<b>10 I thought the practice opportunities prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.04	3.04	3.04	-	0%	2%	24%	43%	31%		51
					0	1	12	22	16		
<b>11 Assignments were graded fairly.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.37	3.37	3.37	-	0%	2%	6%	45%	47%		51
					0	1	3	23	24		

Question and Scale	Instructor	Section	Course	-	This Instructor Only					Responses
					Average Ratings	Worst Rating...	Best Rating			
12 The TAs and/or Graders provided meaningful feedback on my graded work which allowed me to understand my strengths and weaknesses relative to the material covered. Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree	2.73	2.73	2.73	-	0 2% 1	1 6% 3	2 25% 13	3 51% 26	4 16% 8	51
13 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.71	2.71	2.71	-	0 0%	1 2%	20 39%	23 45%	7 14%	51
14 On average, how much time do you spend each week on the course. Scale: 0 to 6: 1-3 hours, 4-6 hours, 7-10 hours, 11-15 hours, 16-20 hours, More than 20 hours	3.27	3.27	3.27	-	0 0%	2 4%	9 18%	25 49%	9 18%	51
15 Would you recommend this course to another student? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	3.35	3.35	3.35	-	0 0%	1 2%	4 8%	22 43%	24 47%	51
16 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	1.00	-	-	-	0 0%	51 100%	- -	- -	- -	51

**Comment Suggestion**

5210 is a great course and the assignment of each week helps me to get familiar a key concept in the AI field. I like the last assignment, which involves the application of openai and the lasted language model. For the first half of the semester, I think we spend too much time on variety of "search", which we have already learned much in other courses.

The TAs are not great in this course. They routinely canceled their office hours without changing the canvas calendar, and they took a long time to respond on Ed. In ohq, they couldn't explain the concepts. It seemed like the classic case of a TA only understanding their exact implementation of a project and not being capable of explaining the concepts or thinking beyond their exact implementation. The recitations were terrible. They were a total waste of time. TAs just reading off of slides as if we're in reading class. They seemed to struggle with explaining the material.

The textbook is great. The course presentation felt quite lazy, however. The lectures were very high level and covered the simple stuff, while not digging into any of the deeply technical parts of the textbook readings at all. The lectures were also edited poorly and seem to be cut from Zoom presentations the professor did during COVID which wasn't the best. The slides seemed to all be copied from Berkeley (with permission obviously) and the professor just went through them at a high level without any real teaching moments. The assignments also did not cover anything beyond the basics from the readings. I am not suggesting to just double the workload of the course, but maybe redistribute some of the time spent on course topics such that the more complex and interesting stuff could be covered more extensively. Overall, this course was good for exposure to AI and its history. If that is the goal of the course, then I think the goal was accomplished. However, it does not feel like it was worth \$2600 from an educational standpoint. I could learn way more about AI for free from Andrew Ng online; he puts much more effort into his slides and explanations than the course team did for this course.

This was a great course. I feel like it provided a good overview of the field of AI, and the textbook will be a great resource for reviewing and for learning new concepts not covered during the course. I hope I get a chance to take the NLP course in the MSE-DS program.

Great class. Truly love the way homeworks are so involved and also worth a significant portion of the grade. Exams are super tricky and a bit definition heavy for my liking but super reasonably weighted at 10% each.

This was an interesting course! I feel a little more able to wrap my head around AI, though I do not feel that I would be ready to anything relating to AI professionally. I thought once the course entered into ML topics, it was much less understandable. If I had not taken Big Data (545), I would have been so lost. I wish that the practice exams were of better quality - most of them were just recycled quiz questions. It seems like a lot of the videos were recordings of in-person classes, so it was cut together weirdly or audio wasn't the best or it seemed like the professor was circling something that we couldn't see. It's disappointing that the online students don't get dedicated videos.

Great survey course overall. Recitations in the second half of the course was mainly based on assignments; more theory/ math needs to be introduced to supplement our learning. More math should be introduced in the quizzes so that we could actually get a chance to do certain calculations and get corrective feedback on it. Some of the test cases aren't really reliable at making sure our approach is correct. HW10 definitely needs a revamp.

Great instructor, great class. The lectures were well-organized and insightful, and the assignments were fair and instructive. I have only one main suggestion: given the current job climate, I wish we could have gotten to neural networks more quickly and spent more time on them. In terms of using AI to pivot careers, it would be helpful to have more demonstrable work with TensorFlow, transformers, etc. rather than A\* Search. but that's a comparatively small thing; this was an outstanding class on the whole. Thank you!

Excellent course that covered a great deal of topics in AI. I wish there was a part 2 to cover more!

Callison-Burch is the best professor of the program from my view, his lectures are very well prepared, along with the well designed homework.

Good course. Professor CCB is very nice, TA team is very helpful. I like this course, and will recommend it to other students. The only thing I want to mention is that I feel the grading of the exams are too strict. Besides the extra credit questions, all of the questions don't have partial points (e.g. for probability questions, if the expression is correct but a mistake in the calculation for the numerical final result, it's 0 point; And if a mistake in the first question such as  $P(a)$ , then in the following questions that use  $P(a)$  as part of the calculation, even though the expressions are correct, all of them are 0 points, which means a mistake of  $P(a)$  leads to 0 point for several questions). Moreover, as a non-native speaker, sometimes it is difficult to make a particularly accurate description of some problem for us, so I think if our main idea is correct, it should be reasonable to get at least some partial points.

very interesting course!

Really well done course by Prof. Callison. He is very passionate about the subject and spends a lot of time also with the students even though this is online course

The course is well structured and well taught. The assignments gauged students grasp of the week's teachings. The weekly assignments were not too long, but some were more challenging and took more time than others. The one issue I had was the formatting of some of the questions on the homeworks were lacking. Also, the clarity of the task was sometimes extremely vague and I didn't know even where to start. The TAs and recitations helped with this, but I shouldn't have to wait for the recitation to be able to start the homework. Other than those two minor things, the class was fantastic.

Overall I liked the course and the TAs were great. The only thing I didn't really like was the final assignment. The cost and time required may have changed since the last time it was offered and it ended up costing \$70 versus \$25 and the tunes took substantially more time causing the assignment to take a while.

This course has been terrific as a survey of Artificial Intelligence, and the Professor's enthusiasm really set the pace. I found the lecture material to be quite dense but the assignments provided the perfect opportunity to bring things together in an applied manner. However, when it came to the exams, I felt that the course tried to pack too much material in too little time.

This course offers a comprehensive overview of AI concepts, making it suitable for establishing a foundational understanding. The breadth of topics covered is commendable, encompassing a wide range of concepts. However, there is room for improvement in clarifying the course's teaching objectives. If the primary goal is to provide an introductory insight into AI, the focus should lean towards explaining fundamental theories and concepts. Alternatively, if the intention is to emphasize practical applications, it would be beneficial to delve deeper into selected topics. Presently, the course appears to aim at imparting both a broad understanding of AI concepts and insights into their real-world applications. If this ambitious aim persists, a reconsideration of the video duration might be necessary to effectively cover such extensive content.

My first takeaway is that this class rocks and CCB is brilliant; I would recommend it to any student in the program. It is comprehensive and insightful, balancing the right amount of theory and code. All of the material was very relevant and connected to the assignments, and the more I studied the lecture notes and closer I read the instructions the less time it took me to do the homework. There is so much great code and notes in this class that I am downloading as much as I can this week. Additionally, the assignments challenged me to the appropriate level and forced me to solidify the concepts while also becoming a better programmer. In reviewing the material for exams, I felt like I actually understood the concepts by having to wrestle with the code. However, a few of the earlier homeworks had timeout errors that were very challenging. It was often difficult to tell whether these timeouts were due to bad Python programming or a bad heuristic, so any update to the autograder (if possible) to give more feedback on whether the errors were in coding mechanics or theory would likely be helpful. The only other piece of feedback I have is regarding the structure of exam notes. I assume that the format/opt-in is likely to perform text analysis on what students are studying and their exam scores. However, I would propose that this method is so different from how some students typically study, that it can be disorienting and inflexible for students who already have comfortable study methods but will trade them in for having notes on the exam. As someone who typically handwrites notes, equations, and diagrams multiple times in a structured fashion to review, it felt like I needed to sacrifice my proven study habits just to have notes to use. It's always great to get out of your comfort zone, but midterms can be stressful and might not be the best time to completely change up study habits. Sorry for the long review, I just wanted to take the time to provide my thoughts since I got a lot out of this class and care about other students also having a great experience in it.

Overall the course design looking good to me. The content is interesting, and the HW is challenging but worthy. The instructor is great. The last HW used OpenAI, I think the instruction for this HW should be more clear. At least to me, the HW instruction is not clear enough and the posted grading rubric by principle TA is very misleading. The midterm is Okay, but the final exam is very difficult with a lot of calculation and details.

Term	Summer, 2023 (202320)	Enrollment	45	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	45	Division	-
Cross Listed Sections	-	Responses	27	Department	Computer & Information Science
		Response Rate	60%	Subject	Computer and Information Science

Average Ratings					This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.74	3.45	3.45	-	4% 1	0% 0	0% 0	11% 3	85% 23	27
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.26	3.26	3.26	-	0% 0	7% 2	15% 4	22% 6	56% 15	27
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	3.08	3.08	3.08	-	0% 0	0% 0	29% 7	33% 8	38% 9	24
<b>4 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.58	3.33	3.33	-	4% 1	0% 0	4% 1	17% 4	75% 18	24
<b>5 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.38	3.05	3.05	-	0% 0	8% 2	4% 1	29% 7	58% 14	24
<b>6 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.79	2.79	2.79	-	0% 0	17% 4	25% 6	21% 5	38% 9	24
<b>7 Accessibility of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.42	2.42	2.42	-	8% 2	4% 1	54% 13	4% 1	29% 7	24
<b>8 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.42	3.42	3.42	-	0% 0	0% 0	17% 4	25% 6	58% 14	24
<b>9 I thought the course instruction prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	2.88	2.88	2.88	-	8% 2	4% 1	13% 3	42% 10	33% 8	24
<b>10 I thought the practice opportunities prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	2.78	2.78	2.78	-	4% 1	0% 0	30% 7	43% 10	22% 5	23
<b>11 Assignments were graded fairly.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.35	3.35	3.35	-	0% 0	9% 2	0% 0	39% 9	52% 12	23

Question and Scale	Instructor	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
		Section	Course	-	0	1	2	3	4		
<b>12 The TAs and/or Graders provided meaningful feedback on my graded work which allowed me to understand my strengths and weaknesses relative to the material covered.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	2.75	2.75	2.75	-	17% 4	0% 0	13% 3	33% 8	38% 9	24	
<b>13 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.08	3.08	3.08	-	0% 0	0% 0	29% 7	33% 8	38% 9	24	
<b>14 On average, how much time do you spend each week on the course.</b> <i>Scale: 0 to 6: 1-3 hours, 4-6 hours, 7-10 hours, 11-15 hours, 16-20 hours, More than 20 hours</i>	3.67	3.67	3.67	-	0% 0	0% 0	25% 6	25% 6	29% 7	24	
<b>15 Would you recommend this course to another student?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.46	3.46	3.46	-	4% 1	0% 0	8% 2	21% 5	67% 16	24	
<b>16 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 24	- -	- -	- -	24	



**Comment Suggestion**

Great course that has a great Professor and great content. Superb class.

The way I've been explaining this course to my friends is that I've received a crash course in the last 10+ years of NLP innovation in 14 weeks. Just like 5210 AI, CCB did a wonderful job organizing the content so that it builds appropriately into the latest advances in the field. The course clearly still has a few rough edges; one particular homework (6) would have benefitted from clearer instruction and probably spent a lot of the class' time going down PyTorch rabbit holes, but there can be some value in that as well. Overall, it's great to have a deeper understanding of the most popular technology in the world right now.

Lecture: Interesting content, good videos. Please add speech-to-text HW: Contain bugs that NEED to be erased for a high-quality course/uni, despite 1-6 mostly copied from previous terms. Please more hands-on transformer coding TA support: Fine, but stopped entirely in the middle of course without any heads-up:( Instr. technical support: WORST experience at Penn. It felt as if it is reactive waiting for students to complain first--NOT their job. I recommend intense quality management training

Well done to the whole instructor team - super interesting course and appreciate the high level engagements of both instructors and TAs.

It s an excellent course. Very upto date with regards to the technology covered. It was the first time offered online so there were hiccups associated with that. The assignments had not been fully reviewed before being given to us. There were only three TAs in the beginning, though I believe one more was added towards the end of the course. There was a period of time when a number of the TAs had to reschedule or cancel their OHs at the last minute due things happening in their personal lives. The offset was a very generous extension policy which reduced tensions significantly. The readings and course content were excellent. As far as I am concerned, this is probably the best course I ve taken in the Dual Masters program.

Thank you for offering this course to Penn Engineering Online! I am very impressed by the quality of the course videos, found the assignments to be challenging yet insightful, and enjoyed learning from the professors and teaching staff. The course would benefit from more TA assistance and recitations for homework assignments.

Might be worth trimming down some of the redundancy in the lecture materials. Assignment 6 was, in my view, not as painful as other students suggested, and complaints about the other assignments were all largely nonsense. I thought this was a fun and well done course.

Having taken AI by Dr. Callison-Burch, NLP was definitely another treat. Dr. Callison-Burch's lively delivery of the subject matter was definitely the highlight of the course, and the MCIT program. The breadth of the course gave me a deep appreciation of the field's development. The homeworks were well crafted. I hope there were more support on pytorch and perhaps another homework using pytorch to deepen our skills.

Excellent course, best video lectures I ve seen after taking 12 courses. Professor CCB is genuinely interested in providing a meaningful student experience. I appreciated the research vibe on hw. Homework s need to be improved as in many autograder is tied to a particular implementation which creates a lot of rework, there should be clarity on inputs, output and type annotations. It was clear that some TAs had not attempted to do homework s by themselves.



The course content design are messy, topics are scattering and repeating across multiple modules, and some important models/techniques are missing out but being tested in final exam. In the pre-recorded lectures, tons of utterances, false starts, repetitions, silent gaps, etc were not properly edited. It gets worse in the last few modules which were only rushed to delivery on the week that it should be studied. Homework are a bit outdated, and instructions are confusing, and the topics covered in homework were not aligned with the course modules. All of these are hopefully just symptoms of a brand new course launch and it indeed was pretty much not ready at the time of launch. We understand that CCB is on sabbatical leave, and busy with capitol hill preaches and media exposures, and thus do not have enough time to get fully prepared for the recordings. During the office hours, both faculties do not seem to be able to keep up with the important new papers or tools emerging in this accelerating field. And this reflects back to the course design that we feel like we are duck-filled with the important milestones in the LMs history, but the essences of those were not particularly highlighted in a way that we are future-proofed. We were hoping the faculties can help to pinpoint to certain aspects of the key ideas that were discussed in the course and to bridge to the cool new stuffs when surveying on the most updated developments every week. Lastly, the course is not designed in a way that it's easy to borrow the brilliant ideas developed in the NLP field and adapt to the other domains that the students are working in. Whatever discussed and assigned as homework appears to be only usable for tasks like text classifications, machine translations, QA chatbots. However, the emergence capabilities in the LLMs, particularly the multi-modal ones clearly showed us that NLP techniques should have tremendous spillover effects on many other industries. We don't see the future in this class unfortunately, not even the NOW. We just took a tour of the museum of computational linguistics.

This is such a valuable course, appreciate all the works that have been done by the professors and TAs. It's just that the auto-grader and the assignment instruction can be clear, myself and others have wasted a lot of time guessing what auto grader would evaluate to make our codes pass (caused by somewhat confusing instruction, in many cases the assignment had to be updated while we are working on it). Though it's understandable as this course is new. Overall, thank you.

The course content was up-to-date and fun to learn, but some earlier HW lacked organizations and instructions.

For me, it was the best course of MCIT. I could learn overall progree in NLP field from lectures and extra reading materials. Especially, other than other course, professor C.C.B. introduced a lot of papers related to the lecture, and these gave me a strong hint for further NLP learning journey. I feel so lucky to take course as my last one on MCIT.

I think the class was great and the instructor was excellent. The availability of TAs and their responsiveness was at times very challenging which made it difficult to complete assignments on time and in full. I think the right staffing of TAs with a high level of responsiveness, commitment and reliability would be much appreciated by future students of this class.

Term	Fall, 2022 (202230)	Enrollment	363	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	363	Division	-						
Cross Listed Sections	CIS5210401	Responses	355	Department	Computer & Information Science						
		Response Rate	98%	Subject	Computer and Information Science						
Average Ratings											
This Instructor Only											
Worst Rating...Best Rating											
Responses											
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.52	3.52	3.52	-	0% 0	1% 5	7% 24	29% 100	62% 211	340	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.34	3.34	3.34	-	0% 1	2% 8	12% 39	35% 117	51% 171	336	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	2.13	2.13	2.13	-	4% 11	17% 47	45% 123	30% 82	4% 11	274	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.30	3.30	3.30	-	0% 0	2% 5	15% 40	34% 93	49% 132	270	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.85	2.85	2.85	-	3% 8	7% 18	20% 54	42% 113	28% 74	267	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.46	3.46	3.46	-	0% 0	2% 5	8% 23	31% 84	59% 159	271	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.36	3.36	3.36	-	0% 1	2% 6	11% 31	33% 88	53% 144	270	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.68	2.68	2.68	-	1% 2	14% 37	28% 76	31% 83	26% 70	268	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.07	3.07	3.07	-	0% 1	4% 11	18% 49	43% 115	34% 92	268	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.29	2.29	2.29	-	1% 2	11% 30	56% 151	23% 62	9% 25	270	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	3.31	3.31	3.31	-	1% 2	1% 3	10% 26	43% 116	46% 123	270	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.65	2.65	2.65	-	3% 8	9% 23	31% 84	35% 95	22% 59	269	
13 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	0.97	-	-	-	3% 6	97% 227	- -	- -	- -	233	

### Cheating Comment

Many people took the final exam online and used Google. As an in-person tester, I felt disadvantaged because I took the exam without the internet and using only my colab notes.

Although the exams were not fully open notes, some students still took advantage of the remote policy and used the slides, readings, and internet for the exam.

NA

n/a

Some people might have exploited the collaborative HW assignment.

The relative grade students received to the quality of questions did not match the avg of the exam scores.

No

### Comment Suggestion

I think the professor does a great job with the course. I love the new enhancements and learning offerings and I feel that the extra credit is extremely beneficial to us while enhancing our learning. I feel the workload is appropriate and unlike other courses which can be extremely stressful and workload intensive, CIS5210 managed to give students lots of knowledge while not making them miserable. It is a model of how all CIS courses should be run at Penn. Some TAs are really helpful while others don't appear to know what they are doing and will take 40 minutes per student because they can't understand some of the basic aspects of the assignment whereas the better TAs can do what that person does in 40 minutes in a mere 30-90 seconds of looking at the code.

This is a fantastic course. The concepts are not easy, but we were given many opportunities to engage with the material well and succeed in the class. There were many office hours with great TAs, and the homeworks were very fair. I feel like I am walking away with a much better understanding of the workings of AI.

I really enjoyed the course! However, I felt that the course was perhaps a bit too broad in the curriculum, particular in the second half. I felt like I was learning a lot of qualitative material on the surface level but couldn't get a full and quantitative grasp of the concepts. A lot of advanced topics on MDP, reinforcement learning, neural networks, and NLP were briefly covered in just 1 or 2 lectures and a few homework assignments, and many weren't covered in the homework assignments.

TAs were highly unprofessional in that they don't have regular office hours and don't even confirm whether they are having OH in the 12 hours leading up to when they're supposed to on the Spreadsheet. All TAs should commit to weekly OH just like all other classes. If they need to cancel, they should arrange to swap with another TA so as to not mess up students' plans to attend OH that day.

A good introduction about the AI industry with special topic of NLP, which is Professor Callison-Burch's expertise. I will recommend to anyone who has no knowledge about AI and want to get a touch with it.

Great course very practical

A tremendous amount of reading. Very interesting concepts.

Good overview of AI concepts, but I don't think it goes super in depth.

The beginning of this class was extremely challenging because it was difficult to get help from the TAs. The office hour queues were unruly. Once CCB opened the collaboration policy, my stress level in the class decreased dramatically. I would consider having a HW collab policy from Homework 2 on.

I believe this is very good course overall albeit not finding it as interesting as I'd hoped. The homeworks were somewhat interesting but the lectures were a bit confusing and boring. I did like the pre-recorded lecture option though. Exams were very confusing though and the toughest part of the course in my opinion.

The instructor is very accessible, and the course is well designed.

I would recommend this course as it was very enjoyable

Class was great, I especially had fun playing with GPT3. There a few comments on how I believe the class could have been better: - more knowledgeable TAs. I do not mean this in terms of course content (although for some yes) but in terms of organization and requirements of the class. - standardized final. I do not find it fair that some students were allowed to take the exam at home and cheat and use all the internet possible while other students (like me) where in classroom proctored by TAs. - I wish HW 10 made us use less of our 18 dollar credit. I wish I could have had fun with it after class but I used all of it just for this assignment :( - I think the homework could have been a little harder and more stimulating. - I believe CIS 121 should be a prerequisite for this class and then the class can be taught starting with material after the first midterm. All we learned until then was BFS, DFS and Dijkstra. It was very boring. I think that should be skipped as way too much time was focused on that. - Exams were way too hard in comparison to the rest of the assignments. Homework was very easy and exams were insanely hard (especially unfair if some students are taking it at home without being proctored and others are proctored in class).

The recommendation of AIMA and Speech and Language Processing as textbooks is amazing! I am also reading other chapters of these books on my own time and I've learned a lot. Arguably, the NLP book teaches LSTM and transformer better than any online towardsdatascience, etc. tutorial I could find - even more clearly than the original papers.

This course was a great class overall.

Loved this course and would recommend it to anybody who has programming proficiency. I was especially impressed by the course modules (i.e. course content videos), they were the best recordings of any course I've had. They were really helpful for reviewing material or catching content whose lecture I missed.

Pretty easy course that gives overview of a wide variety of AI related topics.

Great course!

very fun and informative class

NA

While the topics in this course are interesting, the format of submitting python files that are autograded each week is not a good method of learning. It's easy to get by in this class without truly understanding the material. Recitations give you the framework for most of the assignment so all you need to do is implement formulas in your code properly. Very little critical thinking involved.

Very interesting and useful course. Loved it! It's been one of my favorite CS classes at Penn!

Great introduction to the various manifestations of artificial intelligence, as well as how to approach the concept of artificial agents in problem solving.

I really enjoyed this class! It was a great introduction to AI (I had no prior AI experience before this class). I m really glad I took it because it had a lot of interesting concepts. The course was very well organized. The class website was very useful, and it was great to see all the resources in order with links to everything.

I loved this class!

The course is well-structured and we learned a lot about the math and theory behind the different AI concepts covered in the programming assignments. Grading was fair and lenient, and ultimately the only stressor in the course was simply the amount of content covered, which is a given for any intro/survey course.

Overall the course is really fun, I learned a lot of interesting things about the various topics and aspects of AI. The course is pretty introductory and goes over the high level foundations of a lot of concepts, which are helpful. The professor also taught really well. All the concepts are very clearly explained with sufficient examples and homework assignments. I'm really glad I took this course.

Appreciated the grading policy that prioritized effort and willingness to fix mistakes over one-off assignments or exams, wish more classes would use it

Good introduction to artificial intelligence. However the second half of the course overlaps significantly with CIS520, CIS522 and CIS545 and I wish I learnt more new content.

Great course! Homework assignments can be a little challenging but it's a great course overall!

I liked the course and the content but I must say the Wednesday due dates were tricky! I would often find myself in a cycle where I finish the homework around Wednesday but then I give myself a break on Thursday and then the weekend rolls around and I don't really feel motivated to work that much on Friday and Saturday (and sometimes Sunday even) but then starting the work on Monday is a little late and then classes kick in and then BOOM I'm cramming on Wednesday again. It was a lot better when we started collabing but I didn't love the no repeat collab policy because I have like 2 friends and it's hard to collab with a stranger since you don't know their schedules and there's always a risk that they cause more harm than good.

I think one of, if not the best, CIS courses that I have taken at Penn. I'm a big fan of the unlimited submissions, and no hidden tests approach to the homework. I think the only thing that I would have liked is to have the class slightly curved but there was also a lot of opportunity for extra credit so that kind of made up for that. Overall, I found the course really interesting and learned a lot!

I enjoyed this course a lot. I felt like I got a great overview of the field of AI and many of the important algorithms and tasks that could be solved with those algorithms. The class was always very engaging, and TAs were always helpful with questions. The first couple of homeworks were challenging, but the later homeworks felt trivial. Often we were straight-up told how to write the code. That's fine because it kept the workload down, but I would have liked to be able to visualize the algorithms in practice for every homework (this was only possible for some of them). There was a lot of reading, the amount which was actually relevant to the course and what we needed to know was unclear. But I thought the textbooks were very good and easy to understand. The focus on applications was great. I feel like I have an understand of how the algorithms I learned can be applied.

The course would probably be a bit more engaging in a smaller class. I think the content was worthwhile and interesting but assigned readings that included additional information not covered in class were sometimes tedious.

This is a great course, and a prime example of a course well paced and taught brilliantly. Most CIS courses lack serious pacing and are planned horribly (to the point where no one actually learns anything meaningful at the end). However, CIS 5/421 is able to stimulate interest and introduce new topics at a steady pace where its students can actually absorb the material. It is taught so well that I would recommend this to a non-major.

This is an excellent survey course of the field of Artificial Intelligence, exposing students to lots of algorithms and concepts. The workload was very manageable, and all assignments contributed directly to my understanding of the material. I would highly recommend this course to anyone interested in AI.

TAs are good but they can be more helpful with the homework. Considering I learnt little from the lecture, the coding part should be regarded as more important.

Interesting content and well-taught

A good overview of AI. Has a lot of overlap with the other courses though (519, 520)

Exams are disproportionately on readings, which defeats the purpose of lectures.

Excellent!

As mentioned above, the first half of the course was excellent, but the second half was weaker. Some of the TAs just went AWOL the last half of the course and did not hold their office hours (without a post warning about it on Ed). When addressed on Ed, they said they "didn't fill in the checkmark on the Excel sheet" but that Excel sheet had like 3 checkmarks out of 50 possible TA office hours. By that standard, then only 3 TAs had office hours in late Nov/Dec, which unfortunately may be true, but is similarly unacceptable.

n/a

The only thing that I would suggest would be making the course exams a bit easier.

The course was very well organized. The material was also very interesting.

The course is on the easier end within the pool of CIS courses, and is a great one to take for each CIS student, as with low pressure, it allows them to understand a lot of these super useful algorithms. The assignments are easy-moderate level. Same with the exams.

I love the course!

interesting topics and fun assignments. All the homework has clear instructions and TAs are always available. Great experience overall.

Would recommend to anyone with a bit of interest in AI & ML, not too much material but pretty lengthy and difficult exams, homework is not too hard.

I really enjoyed the project-based learning in this course and actually learning a lot. I appreciated the extra credit opportunities but it's just that students didn't seem to try as hard after they got enough extra credits (including myself) to get an A. I would recommend reducing some extra credits so students would keep engaged throughout the semester.

The quality of the course was great, and the content was very relevant. I found the programming assignments quite hard, especially in the initial stages of the course. Getting to pass the auto-grader scores was particularly challenging during the initial stages. However, the course did get progressively easier, especially after the assignment on CSPs. I rate the course quite highly. It is a very nice course. However, it is quite challenging if you aren't particularly experienced with writing a lot of efficient code. The assignments, in particular, require a lot of time and patience in debugging.

High quality/well-produced slides and modules. The professor knows the material very well. The material in the first half of the semester was clear and easy to understand. The second half material got very convoluted and difficult to understand.

nice class

Great course, I learned a lot but I think the amount of material might be a bit to wide.

The homework designs and descriptions are nearly perfect. Even if a student cannot get the course content, the homeworks will help him/her a lot. It is very interesting and also very rewarding. The exam is slightly difficult and took quite a lot of time to prepare for it since the amount of required reading is large. However, the difficulty of exams are not high.

Thank you for a great course

Homework is well designed. The instructor and TAs are really helpful.

I thoroughly enjoyed this class!

Great course

NA

Really enjoyed the class and instructor!! But think extra credit is enough that you can make for not knowing content super thoroughly, which seems like a little too much. The lecture slides are fantastic, like the auto-grading on homeworks, readings are interesting.

#### Instructor Comment

Professor Callison-Burch is a fantastic instructor who genuinely cares about his students and making their experience as good as possible. It is rare to have a professor who is a talented researcher but is also invested in teaching and makes lots of time for his students. Professor Callison-Burch is one of the rare few that excels at both.

Very engaging professor, conveyed concepts very well in an understandable, entertaining, and educational way.

The professor was great at communicating the material and provided a great learning environment, for example through educational extra credit opportunities.



Clear, empathetic, and wants to be directly involved.

Professor Callison-Burch is a great professor with deep understanding of natural language processing and broad view about the AI industry. He is very nice to talk to and discuss about the topics of AI.

Great instructor

Great at engaging students!

Great Professor.

Great instructor and good person in general

Comes up with creative ways to teach the course content.

CCB is a wonderful instructor. Moreover he cares about students who may be struggling. I almost dropped this course, but CCB gave me some extensions on a couple homeworks and that made all the difference. I really appreciated the accommodation.

He is very invested in making sure students have the ability to do well in the course which was very nice to experience and not something all professors care about necessarily.

Amazing Professor, cares about his students, I think he is truly knowledgeable and awesome!!

The instructor is very accessible, and the course is well designed.

Great instructor

CCB is a great professor with very cool research and insane amount of knowledge. I never met a professor who cares so much about his students and wants them to succeed. The lectures were interesting and CCB was always there to answer any questions we might had.

Professor CCB was an excellent instructor! His lectures were engaging, homework assignments were relevant to course content, and offered extra credit work whenever possible.

Absolutely LOVED Prof. C-B. He was so caring to his students, and passionate about the content, and clearly was very very knowledgeable. He presented the topics in an extremely clear way, making sure to spend more time on ideas that a student might be confused about. Because of this course and his teaching I want to learn more about AI and potentially work in the sector. I always came back from lecture really excited about what we learned and looking to discuss it with peers

Great instructor! Did a good job of using easy to follow examples and teaching relevant things.

Dr. Callison-Burch is very nice and was very accommodating, especially given the circumstances with COVID.

CCB is an enthusiastic and great professor. He makes the material engaging and relevant, and is able to communicate difficult concepts really well.

awesome professor

I loved the assignments for the class!

CCB is such a great instructor! His lectures are very engaging and he's an amazing mentor and teacher. He is always available to talk about research and answer questions. He always answered on Ed quickly and was an overall amazing professor!

Great professor, very supportive and communicates the subject matter clearly.

Professor Callison-Burch was an amazing professor! His lectures were great, and included a lot of visuals and diagrams that made it easier to understand. He is also very friendly and always willing to help. Professor Callison-Burch has been one of my favorite professors in the CIS department, and I would recommend his classes to my friends.



Using extra credits to get free labors for data labelling tasks is just abusing students.

He teaches the content very thoroughly, and he is very excited and fun to listen to!

Professor CCB is kind, intelligent, and very knowledgeable about AI. He is available for office hours and at lectures, and he makes his best effort to make the course accessible and fair for everyone involved.

Great professor, fair and interesting

Explains the concepts very well, very interesting and caring too.

CCB is a great professor and he's very approachable. He makes his students feel comfortable approaching him with questions or concerns and his course content is intellectually stimulating. 10/10 would recommend!

Very nice man! Love his vibe and policies.

Great professor, and funny. I don't know what it is about Chris, but he was extremely likable and I enjoyed being taught by him. (But I still don't know if certain aspects generated bio about him are correct, like his age, is he 45?)

You were a very engaging professor! I can always tell when a professor is passionate about the subject, and it makes me enjoy the course way better. That was abundantly clear in this case, and I was always excited to come to class and remained engaged throughout each lecture. I also like how you incorporated the research of your lab into extra credit assignments, showed videos at the start of class for context, and were always willing to listen to student needs and concerns.

Very enthusiastic and helpful, clearly cares about his students and their learning

He's awesome!

Great Professor!

Prof. Burch is one of the best CIS professors in this department. The level of skill, experience, and interest he exudes during lectures makes the class fun and engaging. He needs to teach more classes, since he is a highlight of the overall CIS curriculum.

CCB is an incredible professor. Thank you so much for this semester.

Professor Callison-Burch was an engaging lecturer, and stimulated student interest in the material through his own passion for the subject matter.

na

CCB is nice. But the course content is too general and usually he just went through the slides in 1 hour. It would be better if he could spend sometime talking about actual Python code.

Showed a lot of care for students and subject matter.

Very nice instructor, makes lectures engaging with practical examples. Sometimes not the best at explaining concepts

Such an amazing and supportive professor.

Excellent! Very well structured and interesting homework assignments along with extra-credit assignments. One of the most fun classes I have taken at Penn in which I also got to learn a lot.

Professor Callison-Burch was great at explaining the material, and the first half of the course was great. In the second half of the course, very large topics were consolidated down into single lectures, and for that reason the second half was very broad with less useful information.

n/a

Professor Callison-Burch is a great professor. He teaches very well. He truly cares about his students and cares about their acquired knowledge in class.

CCB is a great professor, yet his lectures can be somewhat boring, or rather, less engaging at times. He has been extremely prompt throughout with doubts throughout, and a huge help.

passionate

Great and kind professor. He explains all the topics well which made the course a lot easier for me. All the assignments had a lot of instructions and TAs and Professor are always available if you have any questions. great experience overall.

Excellent Professor

CCB is a passionate instructor, with a background in NLP, he can always explain the AI/ML domain knowledge to us clearly and effortlessly. I learned a lot from his lecture and assignments.

Prof CCB has been my favorite professor at Penn. He's always so kind, responsive, knowledgeable, and genuinely cares about students. He makes the vague concepts so fun and easy to understand, and offers various extra credits to allow us to learn outside of the classroom. He showed us that the goal of learning is to actually understand and enjoy what you learn instead of getting an A on your transcript. In a nutshell, 120/100 professor, love him!

Prof Chris deserves an A\* review. His way of teaching was clear and complete. I could understand everything needed to do well in the course by listening to his lectures and going through the carefully curated modules. The organization of the course and the modules was great. However, the assignments for the earlier parts of the course were quite challenging. The course overall was very relevant.

Great teacher with strong background and a sense of humor.

Good teacher, good course

nice guy

Professor Callison-Burch is highly passionate and knowledgeable. I am glad to have enrolled in this course and will look for future opportunity to participate in his other courses.

I am really grateful to take this great course and thank you for efforts from Prof.Callison-Burch and TAs.

Thank you!

Very nice professor

Christopher Callison-Burch is a great professor! He made every lecture and topic interesting and was able to relate it to real life. He is also extremely passionate about Artificial Intelligence and Natural Language Processing which made the class even more engaging and interesting. I look forward to taking the knowledge I've gained and applying to future jobs and classes!

Great Professor

Professor Callison-Burch is very passionate about the content and can make anyone interested in it.

The Best Prof !

Kept lectures entertaining with fun examples and tangents. Provided lots of ways for getting help. Creative extra credit assignments. All in all, great professor.

An engaging professor who was able to imbue excitement into the course content

Term	Fall, 2022 (202230)	Enrollment	94	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	94	Division	-
Cross Listed Sections	-	Responses	92	Department	Computer & Information Science
		Response Rate	98%	Subject	Computer and Information Science

Average Ratings					This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.62	3.62	3.62	-	0% 0	0% 0	8% 7	22% 20	70% 63	90
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.38	3.38	3.38	-	0% 0	2% 2	8% 7	40% 36	50% 45	90
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.72	2.72	2.72	-	0% 0	3% 2	36% 26	47% 34	14% 10	72
<b>4 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.60	3.60	3.60	-	0% 0	0% 0	8% 6	24% 17	68% 49	72
<b>5 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.51	3.51	3.51	-	0% 0	1% 1	6% 4	33% 23	60% 42	70
<b>6 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.17	3.17	3.17	-	1% 1	4% 3	14% 10	35% 24	45% 31	69
<b>7 Accessibility of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.06	3.06	3.06	-	4% 3	7% 5	13% 9	30% 21	46% 32	70
<b>8 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.38	3.38	3.38	-	0% 0	1% 1	9% 6	41% 28	49% 34	69
<b>9 I thought the course instruction prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.25	3.25	3.25	-	1% 1	1% 1	8% 6	48% 34	41% 29	71
<b>10 I thought the practice opportunities prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.10	3.10	3.10	-	1% 1	4% 3	15% 11	42% 30	38% 27	72
<b>11 Assignments were graded fairly.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.56	3.56	3.56	-	0% 0	0% 0	4% 3	36% 26	60% 43	72

						This Instructor Only					Responses
Average Ratings						Worst Rating...Best Rating					
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
12 The TAs and/or Graders provided meaningful feedback on my graded work which allowed me to understand my strengths and weaknesses relative to the material covered. Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree	3.00	3.00	3.00	-	0% 0	8% 6	20% 14	35% 25	37% 26	71	
13 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.82	2.82	2.82	-	0% 0	0% 0	34% 24	51% 36	15% 11	71	
14 On average, how much time do you spend each week on the course. Scale: 0 to 6: 1-3 hours, 4-6 hours, 7-10 hours, 11-15 hours, 16-20 hours, More than 20 hours	3.49	3.49	3.49	-	0% 0	3% 2	10% 7	51% 37	22% 16	72	
15 Would you recommend this course to another student? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	3.51	3.51	3.51	-	1% 1	0% 0	4% 3	35% 25	59% 42	71	
16 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	0.99	-	-	-	1% 1	99% 68	- -	- -	- -	69	

**Cheating Comment**

This is only limited to my "heard of" experience, that some students have the solution to assignments from previous semesters.

**Comment Suggestion**

Great course

Each week provides ample opportunity to learn much about AI including new algorithm(s) which are implemented in coding assignments. The instructor is fun, fair and inspiring.

The course covers a wide range of topics. While this is good, sometimes I hope it could be more focused instead of too broad. The material in the second half of the semester is too much to digest.

This was probably the best instructor I have had throughout my entire degree program. He was great at explaining concepts, and was very empathetic and understanding which I think is a much more effective way of teaching a class. He was clearly excited by the material and made the class fun. The class itself was very well-structured and you could tell that a lot of time went into it. The exams were not heavily weighted which made it less stressful without losing any value. One thing I did not like was that the midterm had specific testing rules but was not proctored, which didn't make any sense to me. The extra credit opportunities helped to relieve stress as well. Overall this course was awesome and I wish all my other instructors would take notes from this class.

It was really nice to transition from CIT596 and highly recc the two to be sequentially taken. With current news on AI it was really nice to learn more about it along with all the EC/Research opportunities. Thank you very much to all!

This has been my favorite course in the program thus far.

NA

It was definitely the best course I've taken in the entire program. Prof. Chris is the best instructor ever, I loved his lectures, the assignments were very appropriate to the course concepts, and although challenging - this class wasn't stressful, which was a nice change to have compared to the previous semesters. The only drawback was TA OHs, which were supposed to happen a couple of times a day, and half of them were never showing up. It was pretty disappointing and annoying.

TAs are very responsive on ED, and can provide constructive feedback on assignments while I got stuck.

Fascinating material and well taught.

The materials of this course serve as a great introduction to the topic of artificial intelligence. The way knowledge is presented is very attractive, and the professor and TAs explain concepts well.

I can honestly say this course was my favorite, hands down, during my time at Penn. Professor Callison-Burch is a national treasure.

I felt like the latter half of the course tried to introduce too much. Realistically I think going into NLP was a bit of a stretch considering we had just gotten introduced to ML concepts as well as perceptrons/neural networks. That said, part of me also appreciated the professor introducing what was obviously his passion/field into the course.

It was an absolute pleasure to be learning AI through Dr. Callison-Burch's lively and humorous lectures. The practical examples and exercises helped cement my understanding about AI. This course has definitely ignited my interest in AI which I would like to pursue further. If given the opportunity, I'd love to take 5300 NLP by Dr. Callison-Burch as part of my MCIT program.

Best class ever. The instructor Prof. CCB is very supportive and responsive, the TA team is excellent and helpful, and the lecture, HW and exams are very well designed. The entire class is encouraging and inspiring. I enjoyed the class very much and learnt a lot. I knew nothing about AI before taking the course and now I developed an interest in AI for my future career because of this class.

The professor was great and the subject matter is interesting, especially toward the second half. Only gripes are the Colab notebook and the fact that TAs often signed up for sessions that they wouldn't cover (even sometimes when they confirmed they'd be there).

It was a fun class. The topic is great, and the homework are fun

This course is very interesting and the professor is excellent. The lecture videos were engaging and conveyed the information well. The two last weeks of content are very dense and might benefit from being spread out over three weeks.

I thought this was a great course. My only complaint was that some of the exam questions felt very ticky tacky and not really a good judgment of whether you understood the course material (e.g. asking what the T in GPT stands for, or asking for the exact word in the analogy man is to software engineer as woman is to \_\_\_\_).

A very interesting course with focus on practically applying what we have learnt via assignments.

Love the course, one of the best course I have had the honour to attend in my academic journey. Thank you so much professor.

Overall, I like this course, but it is a somewhat challenging course at the same time due to the breadth of the topics it covers in a semester. The homework assignments are well designed. Professor Callison Burch is very knowledgeable in this area and is very approachable during office hours. I would recommend this class to anyone interested in AI.

Professor and course assignments are great. But definitely could use more practice and worked examples on the more complicated concepts.

The first half of the course was my favorite block of content I've done in the MCIT program. The second half was weaker (in my opinion). The assignments weren't as challenging, and you could complete them without REALLY learning the material, unlike in the first half of the course. I would have appreciated more opportunities to apply the course content. This is a general comment for all courses, not just this one: I wish there was more feedback on coding assignments beyond just whether you passed the autograder or not. I'd love some actual feedback on my implementation and whether it was good/inferior, how I could have done it better, etc. One last comment: All of that said, I LOVED the autograder setup for this course, specifically the unlimited submission attempts. It made the assignments fun, because it provided enough feedback that I could usually unblock myself without needing to consult a TA (except on one or two rare occasions).

Overall this course is probably one of the best of the electives. Christopher is an awesome professor, very accessible, and very passionate about the subject material. Overall the TAs were great and so, so patient. However, I did have one experience early on in the class that left me feeling not-so-great and questioning my abilities. I had some very small bug in my code for a HW assignment. My logic was otherwise correct. However, I could not get my debugger to work, despite going through various online resources to try to troubleshoot the issue. I attended an office hours to see if a TA could potentially assist me. Maybe there was something I hadn't considered that a TA might be able to shed light on. I really wanted to be able to step through my code and figure out what was going on and find the bug myself. Instead, the TA ignored my request for help with the debugger. I completely understand if they are not able to help on something like that, but would have appreciated them telling me that, if that was the case. Instead, they told me to just use print statements and started to berate me. They told me I shouldn't rely on using a debugger to debug my code, that I should "get good enough" at coding [like them] where I should be able to take a look at my code and realize where there are issues. They also told me sorry for having a "bad TA" the day before [and not them] and that next time I hopefully have a better TA, which I found unprofessional and unkind to the other TAs who are working very hard. (For context: I had attended a TA office hours the day before, and I was still stuck on the same bug). I walked away not feeling great about this interaction. Like I mentioned above, I questioned my abilities, especially my ability to succeed in the course. It also made me feel much more hesitant about reaching out for help in the course. I'm not saying this to get anyone in trouble, but TAs and course staff should be there to encourage students, not tear them down, or other staff members. Beyond this experience, this course was otherwise great. CCB is a great professor, and I wish I could take more courses with him.

Great course. CCB is an excellent professor and human being. The latter half of the course is rather dense compared to the first half, but the material is engaging and enjoyable.

I liked this course and thought the material was very interesting. It was very challenging though. I thought some of the assignments were among the toughest I've had to complete so far in the program.

Chris Callison-Burch is a very knowledgeable professor with deep domain expertise. More importantly, he is up to date with the latest innovation and improvements in NLP, LLMs, and AI overall. Just a few things that need improvement: (1) Please give a Practice exam that includes quantitative questions and reflects the actual exam. (2) Please run at least one exam prep session to allow students to clarify the concepts and work through the practical (quant) questions together. The second part of the course is packed with concepts that are not intuitive and require more practice. Having a prep session will help to check the understanding and reflect on the 2nd part of the course. (3) The gap between good and not-so-good TAs in this course is wild. I'd make sure to provide more training for TAs new to TAing and new to this course. (4) TA availability and POH schedule. It would be great to use Canvas for the POH calendar. Google Docs wasn't fully maintained in the second part of the course, keeping students wondering whether POH happens. Many POH sessions got canceled in the last few weeks. Fixing these issues will make it a 5-star course. Overall, I'd highly recommend taking this course and taking it with Chris Callison-Burch!

I thought the professor was wonderful!! The TA's however were not very accessible. OHQ wait times were often multiple hours and there was a spreadsheet with the office hours and the TA's could check off whether they would host those office hours or not, but they weren't expected to check it off until 15 minutes before they would host the office hours. Most of the time, the office hours were never hosted at all, so I had no idea when there actually would be office hours, and sometimes I would skip other events in my life just in the hopes of office hours occurring (even though I wouldn't know until 15 minutes beforehand--or way afterwards, as sometimes, the TA's wouldn't check off that they would host the office hours, but rather would randomly hop on OHQ 30 minutes after their office hours were supposed to start). This would lead to me refreshing the OHQ page every second for 30 minutes to avoid having to wait 3 hours to have my question answered.

Best class of MCIT program so far!

I really enjoyed this course and it made me consider AI more strongly as a field of future interest for myself when I had never considered it before. I enjoyed the homework and auto grading a great deal to improve in areas on the assignment I wasn't sure on. The tests I did much less well on but I found the material dense in language to remember and wish I had more time or capacity to understand it



Term	Fall, 2022 (202230)	Enrollment	16	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	16	Division	-						
Cross Listed Sections	-	Responses	14	Department	Computer & Information Science						
		Response Rate	88%	Subject	Computer and Information Science						
Average Ratings											
This Instructor Only											
Worst Rating...Best Rating											
Responses											
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.57	3.57	3.57	-	0% 0	0% 0	7% 1	29% 4	64% 9	14	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.50	3.50	3.50	-	0% 0	7% 1	0% 0	29% 4	64% 9	14	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	1.91	1.91	1.91	-	9% 1	0% 0	82% 9	9% 1	0% 0	11	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.64	3.64	3.64	-	0% 0	0% 0	0% 0	36% 4	64% 7	11	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.90	3.90	3.90	-	0% 0	0% 0	0% 0	10% 1	90% 9	10	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.50	3.50	3.50	-	0% 0	0% 0	0% 0	50% 5	50% 5	10	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.55	3.55	3.55	-	0% 0	0% 0	9% 1	27% 3	64% 7	11	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.30	3.30	3.30	-	0% 0	0% 0	20% 2	30% 3	50% 5	10	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.36	3.36	3.36	-	0% 0	9% 1	0% 0	36% 4	55% 6	11	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.36	2.36	2.36	-	9% 1	0% 0	45% 5	36% 4	9% 1	11	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.91	2.91	2.91	-	9% 1	0% 0	18% 2	36% 4	36% 4	11	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.18	2.18	2.18	-	9% 1	18% 2	36% 4	18% 2	18% 2	11	
13 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	1.00	-	-	-	0% 0	100% 7	- -	- -	- -	7	

**Comment Suggestion**

This class was such an amazing opportunity to learn more about how to do research. I loved working on a team and exploring research questions together and also getting to know what other students were working on. Loved it!

Very good initial exposure to AI research - eye-opening introduction to Large Language Models. Team project was sufficiently interesting yet simple enough to finish in one semester.

This class gave me an opportunity to conduct interesting research and it made me feel much more optimistic about the idea of doing more research in the future. The class struck the right balance between having enough freedom to pursue my interests and having enough structure and mentorship in place so that the goals I had in mind were actually realistic, overall a really fantastic experience.

Course difficulty and workload depends largely on the selected topic and the scope of the project. A standard amount of work can lead to a good project, but students are able to set ambitious goals with higher difficulty and workload if desired. Very informative and helpful for getting a feel for research and publication. Would recommend

**Instructor Comment**

CCB is an amazing professor and researcher! This class was very useful to bounce off ideas and learning how to do research. It was also very interesting to see how he and his phd/postdoc students think and do research. CCB is a great mentor and he's always looking to help students reach their best potential.

Term	Summer, 2022 (202220)	Enrollment	70	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	70	Division	-
Cross Listed Sections	-	Responses	45	Department	Computer & Information Science
		Response Rate	64%	Subject	Computer and Information Science

Average Ratings					This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.74	3.74	3.74	-	0%	0%	5%	17%	79%	42
					0	0	2	7	33	
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.48	3.48	3.48	-	0%	5%	7%	24%	64%	42
					0	2	3	10	27	
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	3.16	3.16	3.16	-	0%	3%	13%	50%	34%	32
					0	1	4	16	11	
<b>4 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.33	3.33	3.33	-	0%	6%	18%	12%	64%	33
					0	2	6	4	21	
<b>5 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.45	3.45	3.45	-	0%	0%	21%	12%	67%	33
					0	0	7	4	22	
<b>6 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.26	3.26	3.26	-	0%	0%	23%	29%	48%	31
					0	0	7	9	15	
<b>7 Accessibility of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.28	3.28	3.28	-	0%	3%	21%	21%	55%	29
					0	1	6	6	16	
<b>8 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.34	3.34	3.34	-	0%	6%	9%	28%	56%	32
					0	2	3	9	18	
<b>9 I thought the course instruction prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.30	3.30	3.30	-	0%	6%	6%	39%	48%	33
					0	2	2	13	16	
<b>10 I thought the practice opportunities prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.33	3.33	3.33	-	0%	0%	15%	36%	48%	33
					0	0	5	12	16	
<b>11 Assignments were graded fairly.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.66	3.66	3.66	-	0%	3%	0%	25%	72%	32
					0	1	0	8	23	

Question and Scale	Instructor	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
		Section	Course	-	0	1	2	3	4		
<b>12 The TAs and/or Graders provided meaningful feedback on my graded work which allowed me to understand my strengths and weaknesses relative to the material covered.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.27	3.27	3.27	-	0% 0	0% 0	24% 8	24% 8	52% 17	33	
<b>13 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.42	3.42	3.42	-	0% 0	0% 0	15% 5	27% 9	58% 19	33	
<b>14 On average, how much time do you spend each week on the course.</b> <i>Scale: 0 to 6: 1-3 hours, 4-6 hours, 7-10 hours, 11-15 hours, 16-20 hours, More than 20 hours</i>	3.73	3.73	3.73	-	0% 0	0% 0	12% 4	39% 13	30% 10	33	
<b>15 Would you recommend this course to another student?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.33	3.33	3.33	-	0% 0	6% 2	9% 3	30% 10	55% 18	33	
<b>16 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.94	-	-	-	6% 2	94% 30	- -	- -	- -	32	

**Cheating Comment**

There exist open repositories of the assignments which do not follow the code of plagiarism of the course.

**Comment Suggestion**

This course is very interesting and I really enjoyed enrolling. The assignments support very well the theory of each week's content. The problems to solve were fun and they opened a new field of software engineering that I am more interested in now. The assignments were time consuming due to the translation of creating code from an algorithm idea. The grading is fair and it gives priority for the student to apply concepts in code, which is a great experience to have in order to learn python.

I am interested in machine learning for a long time. And this course gave me a good start on it. Thanks for Professor and all TAs. I really like this course and would strongly recommend this course to other classmates.

Chris is the best!

The class was well organized, and the assignments were good. The last assignment was extremely exciting and engaging with OpenAI, and it would have been great if the other assignments were like it too.

A great course everyone should take!

This course is great. I have learned a lot from the course about AI. Professor Callison-Burch also offered us lots of opportunities to learn current AI research by hosting seminars and bringing in extra credit assignments. The homework assignments are also well designed. They are super interesting and are great for reviewing our knowledge from the class.

There were some multiple occurrences where TA office hours were scheduled but no show without any notify. But otherwise, I enjoyed the topic of the class and enjoy Professor's delivery of the topic and enthusiasm for educating the best way possible. Would recommend highly.

Great course! The material was super interesting and Chris was a great instructor! The only constructive criticism that I can give is that I felt the exams covered material that was not in the lectures nor in the textbooks which felt unfair. For example, I watched all lectures, read the textbooks twice and do not remember seeing anything about image processing, yet in the exam there was a question about image processing. Another example is some of the math calculations required in the exam. We were given the formulas very briefly in the textbook and lectures and were asked to do calculations on the exam. While I think this is perfectly fair, I am someone who learns by doing and by example, so having some step by step examples of the calculations done by the instructor would have been greatly appreciated. Other than that, the course was fantastic. It has the best assignments I have done in the program, Chris is a great instructor and a genuinely nice person, and the material covered has spiked my interest in other topics such as NLP and data science. I would recommend this course to anyone.

Overall great assignments! I feel the clarity on some of the lectures could be improved. Overall great course.

CCB is very enthusiastic about AI and especially NLP, and he provided a lot of interesting and cutting-edge demos and seminar opportunities to broaden our eyes beyond the scope of the course. However, CCB's lecture videos are ALL VERY LONG, and his sentences are EXTREMELY LONG, which makes it very difficult to follow along. What's worse, the slides were full of distracting cartoons but missing clear worked examples. However we were required to work out very detailed problems in both of the exams. We DO NOT have enough exercises on those particular type of problems prior to the exam. Last but not least, CCB has a habit of using students as free resources to create data labeling for his own AI/NLP research in return of "extra-credits". He even used the exam as a chance to collect students' cheat-sheet/notes in a very specific format he desires, which is apparently feeding his AI/NLP research too. This abnormal yet consistent behavior throughout the semesters should have some authority at Penn to conduct an ethical review, if he has abusive use of his power as a professor to exploit the students to provide raw data to his AI/NLP research for free.

I appreciate that Prof CCB put in effort to redesign homework 10 and create updated homework for us.

Great course, covers a lot of topics very well. I'd be interested in a few more examples of things like Markov decision processes and reinforcement learning currently in use in the real world. But overall one of my favorite courses so far in the program.

This course is perhaps the most intense course in terms of contents covered. While it is not particularly comprehensive or technical, the amount of logical capabilities required to properly understand the concepts introduced throughout the classes and the assignments which require real-world application of in-class material were all factors that contributed heavily to the complexity of the class. I feel like some assignments were very difficult to work with (especially the first few) due to the ambiguity of the assignment instructions but TAs were very helpful in supporting student problem solving through recitations, which I thought was very fair and should be a standard applied to all MCIT courses. In addition, the amount of extra credit offered and their content were one of the highlights of this course. Students were asked to support various graduate school research projects by getting an opportunity to actually play around some of the most current machine learning apparatus. Getting a hands-on on those projects were very inspiring and a great way to learn the real world application of class material. I feel like it was very well thought out and fairly graded. This is what I envision as an ideal graduate level computer science course, with an appropriate mix of concepts with actual applications and a grading scheme that is not too heavily weighed against students doing well. All in all this course was very good, if stressful at times.

Great course!

Loved the assignments! I learned a lot from this course!

Overall, I enjoyed this course and got a lot out of it, however, I felt it could have been improved in a few ways: 1. The second half of the course felt increasingly math heavy and there were topics discussed that assumed some background knowledge in calculus and linear algebra. This should have been mentioned in the course description or suggested prerequisites. 2. The video lectures felt very unpolished and rough in spots and should have been reviewed for coherence prior to being released. 3. The material learned in the text book should have been reviewed in the lectures or in some other way (recitation, office hours, etc).

This is a fun course and you can learn a bunch of advanced algorithms. The professor also introduced the new tech in nowadays industry. covering too much content; not enough depth

Term	Spring, 2022 (2022A)	Enrollment	53	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	52	Division	-						
Cross Listed Sections	-	Responses	45	Department	-						
		Response Rate	87%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
				This Instructor Only						Responses	
				Worst Rating...Best Rating							
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.50	3.50	3.70	-	2% 1	0% 0	5% 2	32% 14	61% 27	44	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.24	3.24	3.25	-	2% 1	4% 2	11% 5	31% 14	51% 23	45	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	1.89	1.89	1.70	-	8% 3	14% 5	62% 23	14% 5	3% 1	37	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.65	3.65	3.55	-	0% 0	0% 0	8% 3	19% 7	73% 27	37	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.51	3.51	3.41	-	0% 0	3% 1	8% 3	24% 9	65% 24	37	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.67	3.67	3.65	-	0% 0	0% 0	3% 1	28% 10	69% 25	36	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.65	3.65	3.66	-	0% 0	0% 0	5% 2	24% 9	70% 26	37	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.47	3.47	3.54	-	0% 0	3% 1	11% 4	22% 8	64% 23	36	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.38	3.38	3.26	-	0% 0	3% 1	14% 5	27% 10	57% 21	37	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.39	2.39	1.63	-	3% 1	6% 2	53% 19	28% 10	11% 4	36	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	3.32	3.32	3.44	-	0% 0	3% 1	3% 1	54% 20	41% 15	37	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.59	2.59	2.13	-	3% 1	8% 3	41% 15	24% 9	24% 9	37	
24 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	1.00	-	-	-	0% 0	100% 31	- -	- -	- -	31	



**Comment Suggestion**

A fantastic course for anyone interested in GPT-3, large language models, interactive fiction, or tabletop roleplaying games.

I feel this course was listed as one thing (a dive into machine representations of games such as D&D) and turned out to be something very different (an intro to the SOTA techniques in NLP generation and ML models). Perhaps that could have been more clearly communicated from the start, as that information may have led me to choose a different course instead.

Very good course, perfect for people start studying GPT-3

The course is fun. The instructors are really passionate about the course content. This course also offers very high-quality guest lectures.

I really enjoyed this course. The guest lectures were amazing and the structure of the course was good. Homeworks often had a lot of repetitive elements, which could be avoided. Paper summaries should be made mandatory since a lot of learning happens through those.

**Instructor Comment**

Arguably the most personable and caring professor I've had at Penn. He's had a massive influence on my interests in the field and there's clear enthusiasm and passion behind his materials and lectures.

I enjoyed Dr. Callison-Burch's sections of the lecture, but Dr. Martin seemed to be a relatively inexperienced lecturer overall. She struggled to make the material engaging for most of the course

Very good professor, talented in teaching NLP

Prof. CCB is really nice in communicating the subject matter, and over all, the class topic is a brand new one, yet the organization and deliver is great.

Great at communicating the material and helps a lot in giving feedbacks for our project.

Great instructor! very encouraging, and caring about students. maybe one of the best professors at Penn.

CCB is an excellent professor. The course assignments need some improvement but this only the ~2nd time this course has been offered. I'm confident this will be made into an excellent course with more refinement.

Good

I really like your course!

Term	Fall, 2021 (2021C)	Enrollment	138	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	138	Division	-						
Cross Listed Sections	CIS 521401	Responses	113	Department	-						
		Response Rate	82%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
This Instructor Only											
Worst Rating...Best Rating											
Responses											
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.45	3.45	3.44	-	1% 1	1% 1	12% 13	24% 26	62% 67	108	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.24	3.24	3.21	-	0% 0	3% 3	15% 16	38% 41	44% 48	108	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	2.18	2.18	2.18	-	2% 2	22% 21	35% 34	38% 36	3% 3	96	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.14	3.14	3.12	-	0% 0	2% 2	23% 22	34% 33	41% 39	96	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.77	2.77	2.76	-	3% 3	7% 7	23% 22	41% 39	24% 23	94	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.40	3.40	3.37	-	0% 0	1% 1	13% 12	32% 30	55% 52	95	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.40	3.40	3.40	-	1% 1	1% 1	12% 11	29% 28	57% 54	95	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.52	2.52	2.57	-	3% 3	13% 12	35% 33	27% 25	22% 21	94	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.96	2.96	3.01	-	0% 0	2% 2	28% 26	41% 38	28% 26	92	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.32	2.32	2.36	-	0% 0	11% 10	54% 51	29% 28	6% 6	95	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	3.37	3.37	3.37	-	0% 0	0% 0	5% 5	53% 50	42% 40	95	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.64	2.64	2.66	-	3% 3	13% 12	19% 18	47% 44	18% 17	94	
13 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	1.00	-	-	-	0% 0	100% 84	- -	- -	- -	84	

**Cheating Comment**

N/A

But you know there always is

**Comment Suggestion**

The course was great. It was more work and more challenging than I expected, and the inability to access office hours initially made it very difficult to get help for assignments. But the extra recitations and homework partners helped greatly.

The support system for this class is a complete mess. The decision of admitting additional hundreds of students into the class destroyed any possibility of support from the teaching staff. A lot of TA's (probably those hired after capacity increase) are poorly trained and don't know what they are talking about. And I think some of the biggest benefit of learning at a university vs watching online videos is the support system. Which means this class a lot of the time felt like watching youtube video. Courseload is very uneven throughout the semester. Some weeks are very time consuming and some weeks are way to easy. The selection of topics covered in this course seem to be too wide for the time given. Some of these later topics are not entirely necessary. People taking this class is very likely to have/will take ML or DL courses. So it overlaps with a lot of those courses. That being said, some of the topic covered is very helpful. I am transitioning into software oriented jobs and some of the topics in the first half of the class are exactly what I needed to do those leetcode problems and pass those interviews. As a graduating student, that was very helpful.

One of my favorite courses at Penn. The Extra Credit assignments were plentiful but also allowed us to see how the topics are used in the real world.

The part about this course that I did not like was the extra readings for the exams that were not covered in lectures. I found myself not fully taking the time to understand the material covered in lecture so that I could do the readings. There seemed to be very little overlap between the two and they were long and difficult to understand without further explanation. I think this detracted from my firm understanding of the lecture material.

I REALLY REALLY loved remember.school! I really hope that not only CIS 521 continues to utilize this, but other courses at Penn as well. My retention of material skyrocketed after doing the flashcards 3x a week. Wonderful addition to the class! I also liked the incorporation of the robot EC. It's a great way to see the real life applications of the course material. One way this course could be improved is to reduce the reading. Personally, I do not take CIS classes and expect to read an entire textbook for exams -- it's part of the reason I signed up to do engineering and not humanities. It was frustrating to have to read so much of the textbook all semester -- I don't feel like I retained anything I read in the textbook, I was simply reading it to write notes to use during the exam. Students would benefit if the exam did not focus so heavily on the textbook readings as this is not what I expected a programming-heavy CIS class to be like.

The course material was solid and most of the early homeworks were fairly well designed. However, the later homeworks that dealt with more challenging concepts were very underspecified and became extremely challenging to complete without the recitations (and became trivial with the recitations). It would be nice to move some of the (very relevant and useful) recitation material to the actual homework writeup. Also, the first EC autograder was disappointing - a bunch of hidden implementation requirements that took off almost all points, then requiring resubmission and \*justification\* in order to earn those points back based on the hidden criteria? Not friendly at all. Overall, a solid course and a fair introduction to Python, AI algorithms, and ML.

Probably the most rewarding class in the Computer Science department - I learned a lot and felt that every minute I spent on the class is worthwhile. The lectures are very well communicated, and the homeworks are designed in the way that are clear, easy to understand, and educational. I want to thank Prof. Callison-Burch and all course staff for delivering this amazing class.

Good course that gave a good overview of AI.

I didn't enjoy being forced to use the colab notebook for notes. Felt like a lab rat.

Great course and I thought the teaching staff did a good job to accommodate the large increase of class size, would have been nice if exams were curved even if the class was not as the exam material diverged quite significantly from lectures and homeworks

one of my top 3 classes

Rather fun homeworks (except for the last two haha).

Grading, EC, hw, lectures, recitations were nice. I wish there was slightly less readings required. I thought the remember.school was alright but hard to incentivize doing more cards later in the busy semester and frustrating when you can't make up late days at all. Maybe there can be a better way to make up missed flash cards?

The course as a whole did a great job given the amount of students and the attempts of trying different things. My only suggestion would be to increase the material for remember.school (which will happen naturally) and take some of the emphasis off of the textbook readings. Given the weekly homework assignments, it was almost impossible to keep up while balancing the hws and other classes.

Great course, gives a good overview of artificial intelligence.

Great materials and instructions! The colab cheatsheet costs a lot of time to complete. I personally prefer not to have that and use hand written ones instead.

fair course

Great course.

Everything in this course was very interesting - the lectures, the homework assignments and the extra credit assignments. The only thing I would change is to replace remember school with quizzes again since I felt that remember school was very memory based.

Prof. Callison-Burch was an amazing instructor. He works too hard for his students, which was very touching and made me proud to be a student in his class. Even though the course was full in the beginning of the semester, he enrolled an entire extra section of students and gave duplicate live lectures. Prof. Callison-Burch is very knowledgeable, as all professors should be, but also knows how to run a course smoothly and deal with people.

The videos are nicely made, especially the slides.

CCB was a rock star trying to wrangle almost 600 students this semester. He offered multiple ways to learn the material to suit any student's need. He is definitely passionate about the subject area and teaching. He gave us so many opportunities (almost too many!) for practicing the subject area without restricting us to the confines of grading framework.

Instructor was engaging and I really enjoyed his class. He was able to engage both in-person and remote learners during lecture

CCB is a great instructor! One of the best CIS professors I have had at Penn due to his ability to teach every topic in an interesting way. Given the immense class size this semester, he really went above and beyond to ensure that students felt supported, that he was constantly iterating on negative feedback, and that he gave us access to speakers and technologies in addition to the course material itself. Very happy with him as a professor!

CCB is an engaging professor and a really pleasant person to interact with. His lecture material is well-prepared and I have a lot of respect for all of the effort he put into making the course work. Doubling the expected class size while minimizing visible setbacks is a seriously impressive accomplishment.

I want to thank Prof. Callison-Burch for giving me an excellent education in AI - the course is well-designed and well-executed at the same time, and Prof. Callison-Burch clearly cares about his students and is passionate about the field and teaching. I cannot ask for a better teacher.

CCB was a good professor and I really appreciated him listening to our comments about the class. Sometimes the class was a little difficult and not well explained.

I liked CCB overall but for a short while he was changing course policies which was stressful for us. He told us at the beginning that our exams would be take homes and then changed that after the drop deadline which was really sad.

I really appreciated how the professor was accommodating and understanding about students needs especially in a semester like this, one of the few STEM professors who genuinely cared about students well-being

#### Instructor Comment

CCB cares about the student experience in the course. He listens to student feedback and improves the course as we go. Extra credit opportunities (colloquium, R2D2 projects) are excellent ways to stimulate student interests and expand students' skills beyond what's immediately required by the syllabus. Very good professor.

SO GOOD

Dear Professor CCB, It really shows that you have struggling students in your mind. I didn't expect to need the leeway you provided us this semester - both in terms of extra credit and late days/drops, but this semester has been incredibly challenging for me for a number of reasons, so I just wanted to say thank you for caring. Godspeed.

Great job at explaining harder concepts! I tried to learn ML 2 different times before this class (Stanford online course, and also 520 which I dropped) but this class made a lot of core concepts click. I really appreciate how you take the time to explain all concepts intuitively and work through examples in class. You also care a lot about your students, and the grading and EC was really nice. I appreciate you and your class a lot!

CCB cared a lot about the course. At the start of each week, he would make detailed weekly summaries on Piazza so students knew what was going on.

The Professor did a great job at trying to keep people engaged and being understanding of the pandemic with flexible attendance options. He was definitely my favorite professor this semester.

Really engaging instructor that seems to care for his students.

CCB is an amazing, passionate, and compassionate professor. I love taking any class that he offers!

Null

Great Lectures and very clear!

good professor

Lectures felt like they struck the right balance between breadth and depth. The lectures really enhanced my understanding of the book

Very clear in explaining concepts. Care about students.

HE IS ONE OF THE EXCELLENT PROF.HE MAKES CLASSES SO INTERESTING.

Professor Christopher is an excellent instructor who is able to stimulate interest regarding the subject matter in the students and able to explain the concepts clearly. The delivery of the lectures and the way that the course is organized were what I liked the most.

Term	Fall, 2021 (2021C)	Enrollment	180	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	180	Division	-						
Cross Listed Sections	CIS 521402	Responses	127	Department	-						
		Response Rate	71%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
				This Instructor Only						Responses	
				Worst Rating...Best Rating							
Question and Scale		Instructor	Section	Course	-	0	1	2	3	4	
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		3.43	3.43	3.44	-	1% 1	2% 2	8% 10	33% 40	57% 69	122
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		3.18	3.18	3.21	-	0% 0	1% 1	21% 25	38% 46	40% 49	121
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult		2.18	2.18	2.18	-	1% 1	25% 26	40% 42	25% 27	9% 10	106
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		3.10	3.10	3.12	-	2% 2	0% 0	26% 27	31% 32	41% 43	104
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.74	2.74	2.76	-	3% 3	9% 9	28% 29	33% 34	28% 29	104
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		3.34	3.34	3.37	-	2% 2	1% 1	8% 9	39% 41	50% 53	106
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		3.39	3.39	3.40	-	1% 1	0% 0	14% 15	29% 31	56% 59	106
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.62	2.62	2.57	-	7% 7	10% 10	27% 28	29% 30	28% 29	104
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		3.06	3.06	3.01	-	0% 0	3% 3	25% 26	36% 38	36% 38	105
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much		2.40	2.40	2.36	-	1% 1	12% 13	46% 49	27% 29	13% 14	106
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly		3.36	3.36	3.37	-	1% 1	0% 0	12% 12	38% 39	50% 52	104
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly		2.68	2.68	2.66	-	3% 3	8% 8	34% 35	30% 31	26% 27	104
13 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No		1.00	-	-	-	0% 0	100% 99	- -	- -	- -	99

### Cheating Comment

I suspect a lot of students secretly asked each other for help on the homework, even before we were allowed partners and between non-partnered people. I can't prove this. But in at least one case, my partner and I were stuck on an assignment for hours, but the correct version just appeared while I went out for breakfast, and someone hung up the call. Normally I would report this as suspicious. But its also hard for me to believe that most people did the homework independently and scored well. Cheating was incentivized by having weekly homework that took upward of 60 hours in some cases, which was worth 70% of our grade, alongside the unusual late day policy. If the homework is autograded anyway, I would appreciate a chance to learn the material and get partial credit instead of late days.

no

na

No

### Comment Suggestion

This course was very well run. The homework assignments and extra credit assignments were valuable in learning the course material and they were generally enjoyable to do. This has been one of the best courses I've taken at Penn.

In the future, please come up with a system for office hours that doesn't hinge on scrambling to click the button first. Many times, I waited several minutes in front of the computer, only to end up so far back, I never got help after waiting 2+ hours. In several cases, this was because the TA would arrive a minute earlier or two minutes later, meaning you had to wait with your eyes fixed on the screen. It disincentivizes writing a detailed question in favor of rushing to get in line. For people with slower internet connections, this was an even bigger disadvantage. While I very much appreciate the homework recitations, many of us felt it was unfair. If completing the homework required watching extra lecture hours every week, then theoretically the course should be worth more credit hours. Similarly, the extra credit is much appreciated, but if the majority rely on extra credit to lift up their grades, that seems problematic. The Remember School idea was cool. But I feel very strongly that if quizzes are cancelled, it is unfair to use the practice exam as a quiz grade. To be fair, if we have to do exams with limited open notes, it makes sense to have quizzes. I liked the sci fi references.

loved it!

This course provided students with a general overview of artificial intelligence. The class included comprehensive lectures that made an emphasis on real-world applications of the concepts learned in class. The exams were challenging but not overly complex. The homework assignments were difficult at times, but the course is structured in a way that provides students with lots of support and help if needed. Overall, the course was a rewarding experience and great learning opportunity.

pretty easy, i think too much extra credit is given

Overall, I really liked the course. The material was presented in an interesting way, though I felt like the lectures covered material far beyond what is done in the homework. Also, I didn't like the template notes for the exams because much of the material in the textbook was far more in depth than what was covered in class.

I struggled with the density of the weekly readings and the fact that we didn't go over a lot of the material in them in lecture - I appreciated the lecture/readings recitations that started occurring halfway through the semester. On the other hand, I also felt like the homeworks were too easy - I didn't find myself needing to fully understand lecture material to complete them. I suppose this balanced out the time spent on class material between the density of the readings. Overall, I learned a lot in this course as someone who came in without knowing anything about AI, and I really appreciated Professor Callison-Burch's commitment to making the course as accessible as possible to all the students.

The teaching team made the already interesting content into something amazing. This is one of hte best courses I have taken at Penn.

Great class. I learned a ton. I think there was value in nearly every part of the course. None of the work felt like busy work but rather each assignment/test/reading quiz felt like it was carefully designed to maximize learning.



I honestly thought I would learn more in this class, or have a better time. I think there is a disconnect with the homework and the midterms. The homework is quite easy and straight forward, and none of it genuinely helps my understanding of the content. The TAs recitation sessions give too much away with the homework that I don't understand what I'm doing. The homework doesn't actually reinforce anything in the midterms (ie. Asking me to trace through some algorithm, calculate values, etc). There are too many readings and I think it's unreasonable that anything in the readings and the lectures are fair game, since there is no telling what exactly in the readings is important. The extra credit assignments were very useful. I appreciate that CCB and the TAs handled a really large class, and made so much effort into improving our experience.

I loved this course - I learned a ton and really enjoyed the assignments and lectures.

Good courses, especially as an introductory grad class.

it is good

Wish the class could have been spread out a bit more

Great course, but a little too many parts to keep track of (in addition to lecture, recit and homework, also have r2d2 extra credit and remember.school participation and research extra credit). I would lose track of these parts because other classes also have various due dates throughout the week. Exam formats don't match the homework or exercises given (esp MT2)

pleasantly surprised by some of these homework assignments. i think the strict multiple choice on the exams is a little rough - wish there was more room for partial credit. i also really appreciate the amount of EC but I don't feel like I have enough time to do a significant amount of them. grateful for the option though

I really enjoyed this course as both the pacing and the material was very interesting to me. The assignments were challenging but not brutal so I was forced to learn the material but would not be hung up on it for the entire week. I much preferred the weekly projects instead of the term long ones in other courses and felt they taught me more.

The asynchronous option for the class provided a lot of flexibility. Overall, the course was really interesting and completing the homeworks was rewarding. Adding remember.school flashcards didn't really give me a lot of value and remembering to complete them 3x's a week was often infeasible.

A very well structured course. The homeworks are well developed, the lectures are well taught, and the exams are challenging but rightfully so.

A fundamental course for AI

Pretty easy if you have taken CIS 520 before. The workload is very doable.

The course has clearly-organized online components which make the learning experience very flexible that you could always adjust your own learning speed. The selected readings and books are great, however, the slides and lectures are a little bit confusing... The exams are in mid difficulties, and there do exist tons of extra credits which could be used if a student is worried about the grade. The class size is HUGE which makes the class piazza kind of a mess, but the professor and the TAs worked very hard to manage the workload!

na

I would recommend this course to other students.

The course is very organized, which facilitates learning. It is good course, which covers general topics in AI, like search, MDP, machine learning, and so on.

The courses are really good not only for cs students, but also good for beginners.

Good course

Pretty good course.

**Instructor Comment**

He was a very good instructor. He brought plenty of energy to an 8:30 am class and it was obvious he is knowledgeable and passionate about this subject. I enjoyed this class and would recommend it to others. My only critique is that the homeworks were a bit on the easy side, but that might be because we had unlimited submissions to the autograder. To make the course more challenging, you could limit the number of submissions or use hidden test cases.

I'm torn in responding to this because Callison-Burch was one of the most interesting professors I've ever had at any academic level. He's very compelling and clearly passionate about the subject, in addition to being very friendly and likeable. At the same time, I feel the course was one of the worst I have taken. This may have to do with the huge enrollment, but it felt de-personalized and disorganized. In the future, I hope this professor considers limiting experimental policies to one per semester, or on an opt in basis.

One of the best professors I have ever had. I had very little programming experience when I enrolled in the course and was quite worried how it would turn out. He explained everything thoroughly and made learning challenging topics as easy as it could be.

Excellent and engaging! Very approachable and friendly.

The instructor was very understanding of and accommodating to student concerns. He clearly tailored the class to help best suit students' learning needs. The instructor made the class very accessible for students with sufficient computer science background, yet challenging enough for a rewarding experience. The format of the class was helpful to facilitate learning through various means, including exams, homework, and various extra credit assignments.

doesn't know the content too well

Thanks for all of your work in making the course accessible to all the students!

CCB is one of the best profs I have ever had the grace of being a student. I would say his strongest skill is making challenging and potentially dense content become easy to follow and exciting to learn. I really can't say enough about how good CCB is at his job. CCB for President!! :)

CCB is a fantastic teacher. Not only does he want his students to succeed and learn, but it is clear that he is extremely excited by the class material. In every lesson he motivated my interest by linking the course material to real world applications. On top of that, the way he teaches the material makes it very approachable even for complex topic topics.

CCB's video lectures are really good, and his lecture slides are great too. The class website is very organized, and I appreciate the number of extra credit opportunities he gives.

The material speaks for itself but CCB's ability to explain to students of so many different backgrounds @Penn is remarkable

I really liked Professor CCB - he was very passionate about the material and tried to cultivate interest among his students. I felt like he genuinely wanted us to succeed and learn, which I really appreciated.

Very good

CCB was a very good professor!

Overall pretty good but I think the overly fast pace of the course took away from the learning. The content was pretty rushed and it was generally unknown what to expect on the class exams which were particularly challenging.

The instructor sparked a lot of interest in me.

Excellent instructor who did a great job at explaining the concepts and making them interesting. Kept the classroom engaged and provided enough examples to make the concepts tangible almost immediately.

CCB teaches the course very efficiently and explains the content really well.

Extremely passionate in the material and is compassionate towards students.

Amazing!

A good instructor with nice lectures

very professional and very nice professor

Chris is a very responsible and responsive professor. I can feel that he is engaged to encourage his students into the AI area, even though the class size is huge. Will definitely recommend his class to other students!

Professor Christopher is extremely energetic and easy-going. It was a great pleasure to be one of his students.

Very good, clear lecturing

great professor, fun and informative class

His lectures are very clear and easy to understand. I had no prior knowledge in Artificial Intelligence, and this course sparked my interest in the field. He gives a lot of opportunities to make up for your grade, which boosts confidence in getting a decent grade. He appreciates all the work students put in for his course.

Chris is an excellent instructor. He conveys course contents clearly and effectively, and his lectures are interesting and informative.

Instructor CALLISON-BURCH, CHRISTOPHER spent a lot of effort on trying to improve this course. It is not easy since this course has a huge number of students, yet I think he did so good in arranging the course material, assignments and the exams. There's a lot of opportunity regarding the extra credits, so it won't be difficult for us to find a way to learn more.

Very good professor

Really down to earth, super friendly and cool professor.

Pretty good professor

Term	Fall, 2021 (2021C)	Enrollment	11	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	11	Division	-						
Cross Listed Sections	-	Responses	7	Department	-						
		Response Rate	64%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
					This Instructor Only Worst Rating...Best Rating					Responses	
Question and Scale		Instructor	Section	Course	-	0	1	2	3	4	
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.29	2.29	2.84	-	14% 1	14% 1	14% 1	43% 3	14% 1	7
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.50	2.50	2.83	-	17% 1	0% 0	33% 2	17% 1	33% 2	6
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult		2.86	2.86	2.89	-	0% 0	0% 0	29% 2	57% 4	14% 1	7
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.86	2.86	3.11	-	0% 0	14% 1	29% 2	14% 1	43% 3	7
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.29	2.29	2.49	-	29% 2	0% 0	14% 1	29% 2	29% 2	7
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.57	2.57	2.90	-	14% 1	14% 1	0% 0	43% 3	29% 2	7
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.57	2.57	2.57	-	14% 1	14% 1	14% 1	14% 1	43% 3	7
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		2.71	2.71	2.71	-	0% 0	14% 1	29% 2	29% 2	29% 2	7
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent		3.14	3.14	3.19	-	0% 0	14% 1	14% 1	14% 1	57% 4	7
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much		3.00	3.00	3.01	-	0% 0	0% 0	14% 1	71% 5	14% 1	7
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly		2.86	2.86	2.86	-	14% 1	0% 0	0% 0	57% 4	29% 2	7
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly		2.14	2.14	2.14	-	29% 2	0% 0	14% 1	43% 3	14% 1	7
13 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No		1.00	-	-	-	0% 0	100% 7	- -	- -	- -	7

**Comment Suggestion**

Good

Poor

Very well-designed course with numerous interesting examples.

The assigned readings are a bit too much given that there are already so many homeworks and extra credit tasks. Some of them did not make any sense since they were not covered at all in class.

**Instructor Comment**

Good

Poor

He has the ability to make difficult topics easier for students to understand.

Term	Fall, 2021 (2021C)	Enrollment	234	School	School of Engineering and Applied Science						
Activity Type	ONL	Eligible	234	Division	-						
Cross Listed Sections	-	Responses	150	Department	-						
		Response Rate	64%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
This Instructor Only											
Worst Rating...Best Rating											
Responses											
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.39	3.39	2.84	-	1% 2	4% 5	13% 18	20% 28	63% 89	142	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.16	3.16	2.83	-	1% 2	5% 7	17% 23	30% 42	47% 65	139	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	2.92	2.92	2.89	-	2% 2	5% 6	19% 25	50% 65	25% 33	131	
4 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.22	3.22	2.90	-	3% 4	5% 6	14% 18	25% 33	54% 71	132	
5 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.35	3.35	3.11	-	1% 1	5% 7	12% 16	22% 29	60% 79	132	
6 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.69	2.69	2.49	-	8% 10	14% 18	14% 18	32% 42	33% 43	131	
7 Accessibility of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.44	2.44	2.44	-	15% 19	12% 16	16% 20	29% 37	29% 37	129	
8 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.24	3.24	3.19	-	1% 1	5% 6	15% 20	28% 37	51% 66	130	
9 I thought the course instruction prepared me to do well on the graded assignments. Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree	3.09	3.09	3.09	-	2% 3	5% 7	14% 18	38% 50	40% 53	131	
10 I thought the practice opportunities prepared me to do well on the graded assignments. Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree	2.89	2.89	2.89	-	2% 3	6% 8	27% 35	29% 38	35% 46	130	
11 Assignments were graded fairly. Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree	3.52	3.52	3.52	-	0% 0	1% 1	7% 9	32% 42	61% 80	132	

Question and Scale	Instructor	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
		Section	Course	-	0	1	2	3	4		
<b>12 The TAs and/or Graders provided meaningful feedback on my graded work which allowed me to understand my strengths and weaknesses relative to the material covered.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	2.68	2.68	2.68	-	5% 6	11% 14	27% 35	28% 37	30% 39	131	
<b>13 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.01	3.01	3.01	-	0% 0	2% 3	23% 30	45% 58	29% 37	128	
<b>14 On average, how much time do you spend each week on the course.</b> <i>Scale: 0 to 6: 1-3 hours, 4-6 hours, 7-10 hours, 11-15 hours, 16-20 hours, More than 20 hours</i>	3.85	3.85	3.85	-	0% 0	2% 3	8% 11	31% 40	38% 50	130	
<b>15 Would you recommend this course to another student?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.34	3.34	3.34	-	2% 2	3% 4	12% 16	27% 35	57% 75	132	
<b>16 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.99	-	-	-	1% 1	99% 129	- -	- -	- -	130	



**Comment Suggestion**

The extra credit opportunities started to become overwhelming, at which point I ended up completing very little of it. I wish I could go back and correct that. And I know this was driven because of student demand, but the course at many times felt like it got too big, too fast. There will always be student outrage about one thing or another, but I think keeping a medium sized cap for the second run of this course would have made it smoother for the students that were in it.

Was a good course but room for improvement. Also, the professor should takes pains to not constantly change the course mid-course.  
very responsible teacher.

Very patient and responsible professor. Really cared about us learning the course of content.

Overall good course material. TAs often miss their schedules office hours and not responsive on piazza in the later half of the semester. There is disconnection between lecture, homework and exam. Final exam is difficult considering the time we have to prepare.

The content of this class was interesting, but it was the worst run class I have taken. There were mistakes in the course material that the professor acknowledged but never corrected. The TAs and professor were largely unresponsive. Some of my posts were not answered for over a week. TAs regularly cancelled office hours with no notice then ignored our inquires on piazza. I was highly dissatisfied with this course.

Prof CCB is amongst the best professors I've encountered. His enthusiasm for the subject matter is infectious, and the assignments are all well selected and designed to be challenging but not demoralizing. The guest speakers and interactions with his PhD students were also very very appreciated. I also appreciate that he listens to class feedback, which can be seen from the interactions on our Piazza.

This course is great. The instructors did a great job on teaching all the contents. The homework assignments are challenging enough and provided great practices for the students. Two comments for improvement: 1. the course's content is too abroad, so some of the parts are just barely touched the surface. It would be nice if the course could focus on just half of the contents and go deeper on them. 2. the required reading contents are too much, some of the readings are not correlated to the video contents.

Very good course and with lot of extra credit opportunities it helped us to understand more real world application and also extend the concepts learned in assignments.

I think the notes policy for the course was strange. I would prefer to have an open notes, open book exam instead of the limiting notes system. I understand that the notes are used for CCB's research, but it did not help me preparing for the exam much. Also I think the grading of the assignments overall was too lax. With all the extra credit, it was almost impossible not to score an A. The unlimited submissions are fine, but hidden tests would be ok in my opinion. Also one suggestion: Do not grade the R2D2 extra credit, but make them optional. Instead do provide useful feedback and solutions to these extra problems. I for my part did not have the time to complete EC3 and now I have no idea how to implement it correctly, although I would like to know more about NLP. Also in general, I would like to have much more worked examples to get in to the doing of writing NLP algorithms. The latter part of the course felt very rushed and I don't feel I have good understanding of how NLP algorithms are used in practice.

This is the one of best course I took. It is well organized and the homework was well prepared according to the lectures, although it was challenging, it gave me huge satisfaction for achievement. One thing to improve was too much extra credits, coming up time to time which was not informed and not trackable. Those extra credits were not for people, who can not make extra extra time for that.

This is an excellent course. I think it could have more depth and challenge in certain areas as a graduate-level course, but it already covers so much breadth that I'm not sure there would be enough time in the semester to really do that without losing some breadth. Professor Callison-Burch is excellent, but his recorded video lectures are a bit all over the place. Overall, one of the best courses in MCIT Online. Penn should consider using traditional recorded lectures in place of the little snippet power point style lectures that currently dominate the MCIT Online program. I think the assumption is that online students don't have the time or devotion to watch a full traditional lecture like the on-campus students, but this is a huge disservice to the best students and waters down the whole program in my opinion. I think the majority of high-performing students prefer the long-form lectures and often need to watch long-form lectures from other sources like MIT, Stanford, Berkeley, etc. because our lectures are lacking depth and examples.

This was a very good and very difficult course. I would recommend it. My only big picture critiques are that it initially assumed more python knowledge than many students had, but then revised and provided resources to adapt. And it also included neural networks in at the end in a way that didn't give enough time to digest the subject well. Overall, it was well structured and I got a lot out of the course.

I loved this course, but it felt rushed. There were so many things just 'touched upon' but not enough in depth understanding. I guess it is because it is a survey course, and that is fine. One major thing was the disorganization. It was so disorganized I had to stop reading piazza as it was causing too much anxiety. Things were changing on a daily basis. Extra credit was given (almost daily) which seemed to be just a way to help graduate students get their work done. I would have much rather had actual work that taught me something. Overall, interesting course, needed more. Only major issue was that the final was unfair given the amount of information and scope of the assignment's and practice tests.

This is a good course overall and I learned a lot. But it's also the most challenging MCIT course I had so far. It's really time consuming each week, and the lectures don't usually prepare me for the assignments. There's also no meaningful feedback on assignments so if I didn't get it right, I never got a chance to figure it out or find a better solution.

This course was a great and useful one and I am glad that I had the opportunity to take it. The material was interesting and Professor Callison-Burch made the course material easier to understand. However, I think there was way too much material to cover in this course. Each module lecture and assignment was too involved and took too much time. This was hard to balance for students like me who are taking courses online and working full time. Professor Callison-Burch taught this course online and in-person and I don't think he differentiated the expectations and/or responsibilities of students between the two and that made it extra challenging for the MCIT students in my opinion. I think that this course is useful and could be better if split into two courses or some of the modules / assignments were altered. Thank you for everything this semester!

The instructor was absolutely fantastic. He made the course great. I think without his office hours, the course would be average, at best. On the other end of the spectrum, the TAs were not good and didn't seem to have any interest in putting in the effort. Frequently they would say that they didn't know, but they would give out the answer. It would then be up to me to figure out why the answer works. Questions on Piazza were either answered by Callison-Burch or not answered at all. We supposedly had close to 30 TAs, but it felt like a class with < 5. I can count on one hand the number of times particular TAs responded on Piazza, which is absolutely atrocious given that there are > 1500 Piazza posts for the course. The TAs would frequently open the OHQ queue and leave without answering a single student. This happened multiple times a week and I experienced this multiple times in one day. It got to the point where I gave up on going to OHQ for the majority of the term because the TAs would scarcely be there to help. I am amazed that Associate-Professor Callison-Burch was able to run a course as well as he did with as little support as he received.

Overall, a really great course. My only comment is that the final this semester asked questions that I (and I think others?) were wildly under-prepared to answer. If you want us to be able to answer those kinds of questions, then you should be creating homework around building those skill sets. The homework did not prepare me for the final.

Favourite class by far, Professor CCB is fantastic at teaching.

Excellent course. I've nominated the teaching staff for award recognition.

Professor Chris Callison-Burch is a fantastic instructor. He should be proud of the effort he has made to provide a meaningful course that engages at a high level while providing a rich tapestry of content. This course is an example of what a great course should look like. Thank you for the opportunity to be a part of this experience.

Overall I really enjoyed the course and learned a lot. However, I think it was unproductive to ask us to read so much of the textbook. Ultimately, there weren't that many exam questions based on its content, and it didn't add a lot of retainable value beyond the lectures. I spent hours each week reading that material and taking notes on it, but it went into so much depth that it was highly difficult to absorb it all, so the effort was largely wasted. I don't think most textbooks are actually meant to be used that way (read in detail and tested on arbitrarily). If I could go back and do the course again, I would have used those 3-5 hours a week to work on a side project that made creative use of the AI concepts in the course. My impression is that we were asked to read and take notes on the textbook in the inconvenient Colab note format just to support the professor's research on NLP and smart textbooks. This bothered me because it felt clearly skewed toward research purposes rather than toward real educational value. I do think it's great that our professor can find so many ways to unite teaching and research, but in this case, it probably wasted students' time. I found the UC Berkeley live recorded lectures on YouTube to be a much more helpful supplement because of the clear and natural way that Pieter Abbeel and Dan Klein talk about the course content. Hearing things in a relatable, human way sticks a lot better than reading formalized descriptions. At the end of the day, we are never going to remember dozens of variations on algorithms and all their mathematical details. We learn the conceptual frameworks, how to think, and how to dig deeper for details when necessary. I think the course should place less emphasis on memorizing the textbook and more emphasis on enhancing students' ability to reason about AI. If there's a "smart" way to use a textbook, it may be in synthesizing and applying its content, but then that should be a goal in itself that isn't later devalued by testing on its arbitrary details.

The course materially is certainly interesting, but I believe the delivery fell rather short considering the instructions and requirements were constantly in flux during the semester. That being said, this was the first time the course was offered to such a large class size and I hope that future iterations of the course would improve over time.

Great course, well structured and learned a lot.

Materials are super interesting, instructor is very approachable and provided a broad overview of the subject matter. The talks he organized with external speakers were great. There are many extra credit assignments not directly related to class materials but related to contributing to instructor research, we were also made to summarize textbooks in colab for feeding research, although all this is "optional" as exams are super hard and containing subjects not seen in class makes it almost required. I think this also creates some unfairness in grading as students with lots of time to do repetitive EC tasks have a grade boost.

Overall, TAs were supportive. There was one instant where TA was disrespectful and wasn't being attentive to the question that I had. When TAs are in private office hours, it should be the school's policy to make sure that all TAs attend private office hours using their real names, not some aliases of some sort. This makes TAs more prone to being disrespectful because the students will never know the TA that disrespected them online.

Pros: Projects were reasonable and interesting, but the volume was very high. CCB is a very personable professor and provides ample extra credit opportunities. Autograded coding assignments were helpful in knowing my score right away instead of having to wait then submit regrade requests. The material itself was interesting and directly applicable to today's industry. We also had guest lectures from prominent AI figures in the community, which was a nice bonus. Cons: Getting TA support was nearly impossible due to the volume of people in the class. I gave trying on about week 3. The course logistics were pretty disorganized as well, which I think came from how many students were in the course. The final exam was brutal for some unknown reason and didn't solidify my knowledge of the course material. It seemed like it was intended to weed out people. Otherwise, with a couple adjustments 521 could easily be the best course in MCIT (meaning--it's appropriately challenging, engaging, but doesn't absolutely demoralize the student population with a difficulty that doesn't increase ROI.)

One of the best courses in the MCIT in my opinion, good amount of theory and practice. I thought that the main textbook's readings were sometimes a bit intense but I really enjoyed the Stanford chapters.

The course could use improvement in its organization but the content was very valuable

I thoroughly enjoyed CIS521; it is a superb introduction to the vast field of AI and covers a large amount of content in a short space of time. CCB is an incredibly welcoming, inclusive and generous instructor whose office hours bring the concepts to life. The ability to interact with his PhD students made me feel part of the Penn community. The assignments are well thought out and aligned to the taught materials. Furthermore, there is ample opportunity learn more about topics beyond the lectures and readings. Overlooking the few teething issues relating to organisation and TA response times, it is in the running for my favourite MCIT class so far. It's so good I wish I could go back and do it all again!

I think this course is one of my favorites. Things to improve upon: there were too many course changes as the semester progressed. For online students with full time jobs, things have to be in place and course logistics can't be fluid. Some of the lectures were not integrated well (Neural networks / perceptrons) and needed more time and examples. I would also recommend that some practice problems be given especially for the math/logic behind the assignments and book readings. This would help prepare students for assignments and exams. Overall, fantastic professor!!

The professor demonstrate great ability to explain complicated concepts in a simple, efficient and fun way. He also has great demeanor. Homeworks are my favorite part of this course, very well designed, through which I gained valuable hands-on experience. The two homeworks for MDP and reinforcement learning are somewhat easy with most helper functions provided, it would be better to have us get hands dirty to implement more helper functions to get better understanding about the concepts. There are some not so interesting extra credit tasks such as data cleaning & collection for Phd's research, the weight of them are a bit high. You probably can still get an A if you complete all extra credit tasks without taking final exam. Would be better to change those data collection extra credits as a volunteer tasks instead of associating them with scores. Overall it's a great course and I would recommend this course to other MCIT students.

A major issue with this course was the constant changing of guidelines for projects, deadlines, note formats, autograder test visibility, etc. This is really disruptive for online students in the MCIT. Many of us have other jobs and commitments; it's really hard to keep up with a course that has 10 changes a week. A classic example of what I'm talking about is the fact that we were allowed to work on the first extra credit assignment in pairs. Only after the submission deadline were we informed that our extra credit earned for our work would be split. This is the kind of thing you should be informed about up front. I could have spent half the time on it and gotten more credit than I ended up receiving. TAs were an issue in this course. Unfortunately, the TA experience often makes or breaks a course for students. Questions went unanswered on Piazza for way too long considering there were 30ish TAs. Office hours were constantly moving and changing and being canceled, another issue for online students that are part time and working around other commitments. Tests were just plain silly, focusing on minute details from random sections of the assigned readings that were never even discussed in class. I don't understand the philosophy behind this; it ultimately made me just not even care about the final because I knew it would be worthless to study for. If you think that's a good thing to be said about your course, then continue on as you have been. But I think that is an indication something has gone awry. The extra credit for the course was just way over the top. If it had been limited to just the R2D2 stuff, it would have been great. But farming us out for research purposes was really excessive and exploitative. I would suggest toning that aspect of your course down, or just asking students to participate if they want and not bribing with EC. Overall I learned some pretty cool stuff, especially early on in the course, which I am thankful for. I wish that the assignments/quizzes/tests had pushed me more to commit this stuff to memory. Unfortunately, I don't know how much of this I'll retain long term.

CCB was incredibly helpful and supportive of the students. I really appreciate his willingness to listen and be fair to the students' needs. It made for a great learning experience.

I was delighted with this course, it gave a really good overview of artificial intelligence and got me excited about diving into it further.

Too many students, not enough TA's. This caused waiting for OHQ to be anywhere from 1 hour to 2 hours, by which you would not be able to see a TA. Also caused a lot of piazza questions to go unanswered or solved by students instead. Exams seem fair but submitting notes in the google collab format can be tedious and I don't really see the point. Ended up just using the 1 sheet of handwritten notes. A lot of extra credit opportunities. Professor seems friendly but too many changes during the semester- for example when he attempted to add hidden tests to the homework auto graders. Changes like this should be done the following semester- not announced in middle of semester.

TA access is highly limited (waiting endlessly for 1.5-2 hrs to have a 5-min question answered) while Piazza response can take days, exacerbated by assignments that are leaps ahead from the lecture materials

Professor CCB loves AI and works very hard for his close group of PHD students. However, this course felt like an after-thought for him. The low-quality lecture videos which skipped half of the relevant information was bad, but worse was covering this up by insisting on reading the textbook to fill in major concepts which the lectures lacked. The advantage of taking college classes is to learn in multiple dimensions: audible learning, visual learning, tactile learning, etc. Reading is often a good way to learn the concepts a different way and plug in small details. It should not be the only means of learning major concepts (I can do that research on my own without spending the money on a college course). Additionally, the course logistics in this class were the worst of any class I've ever taken. I appreciate that professor CCB wanted to improve the class and was brainstorming how to do that, however, once the Syllabus is printed and the course logistics have been communicated in week 1, there should be no significant changes later, especially to scheduling. The midterm being moved a week, communicated only a few weeks prior was especially bad (and allowing people to still take it early then makes it unfair to those students who took it early less studying). Also, it felt like professor CCB had no respect for the adults who were taking his class. Random partners for HW? It felt like grade school. We are adults. We can communicate and find partners. Also, forcing us to take the practice exam by making it count as a grade (the practice exam), was insulting. Again, we are adults. If we choose not to practice and do worse on the real exam, that is our own fault. Lastly (and I'm sure this is an unpopular opinion), the homework recitations and extra credit in this class went way too far. First, the recitations basically gave us the answer for every homework. We don't learn technical concepts by copying 80% of the code from recitation. This wound-up spoon-feeding everyone a 100% on every homework. Second, the extra credits in the class were too plentiful and a huge distraction. Worse was that half of them were only available to a limited number of students, giving a huge advantage to those not working. These recitations and extra credit assignments were a clear cover up to mask the lack of instructional quality we received in the online version of this course (I even heard that the on-campus students were given more challenging homework assignments. This is the kind of thing that everyone in the online MCIT is concerned about a diluted experience). I could go on-and-on, but I only have 500 words. Overall, professor CCB is here for his research, and not his students (at least not those online). PS Yes, I will admit that I used the recitations and extra credits that I'm criticizing, however, upon reflection, I would have learned more without them.

The beginning of this course was a total challenge and made me strongly consider dropping it. Over-enrollment led to an utter lack of help when needed most, wait times for private office hours could be hours long including waiting in the queue for all those hours to ultimately not be seen when the time slot expired. It was not considered that folks who took the first iteration of 591 had no prior python experience and the expectation of completing weekly homework assignments without that skill level was unrealistic and demoralizing. All that said, I do believe that CCB listened to feedback and continued making changes to improve the student experience throughout the semester. New TAs were added to improve availability - all the TAs I encountered were excellent, knowledgeable, friendly, and helpful. I appreciated the continual opportunities for extra credit and the emphasis on heavier grading weight for homework and quizzes vs. exams. I would advise others to take this class with my biggest feedback being to familiarize themselves with python prior to enrolling.

I think the organization of the course needs to be improved. There were so many last-minute changes that made this course a logistical nightmare. The content was interesting, I felt like I accomplished a lot, but the number of hours required to complete assignments was far greater than any course in the program. I think the intricate knowledge of python and certain python modules, and realistic estimate of time needed for assignments should be communicated in advance. I think the course staff did try to implement things to assist us but many of us who work full time and have other obligations did not have time to take full advantage of these opportunities. Overall, was an interesting course but far too time-consuming for an MCIT-er who has a busy life or wants to take more than 1 course.

The TAs often didn't show up to office hours which was quite frustrating.



This course is in my opinion the best class in the MCIT online program given its well designed course content and the overall great experience with instructors. Professor CCB is very active on Piazza and accessible during office hour as well. It makes me feel included and supported. TA led recitations set students up for success with regards to graded coding assignments. Professor CCB also provided a lot of research participation opportunities and extra credit challenge problems, which helped boosting the fun level of studying even more. It is quite a lot of work both in terms of video+reading content length and coding time spent but all the good work are rewarded.

Most of the assignments were not only good, they were excellent. They seamlessly guided the student through the material by providing the perfect balance between giving information and leaving room for filling in the blanks through research and struggle. That said, the one's that failed to strike this balance were exclusively in the direction of not enough information. The only one that I can remember that (though there were others) that I really struggled with was the last one. I did some research and apparently this problem wasn't made for this course. It's a popular problem. I get this, but I think there should be some additional resources to tackle this assignment.

The course logistics were a nightmare, which was understandable given that the course attendance was allowed to go up to 500 students. But there was no reason to change the hidden state of the test cases 2 weeks after the course drop deadline had passed. The head TA was very rude. The material was also all over the place and copied over from UC Berkeley, or at least most of it. The lectures were all over the place and not concise nor was there a lot of continuity. They tried to do too much in the little time that there was to teach this course. For example, the first half of the course could be expanded into a full 15 week course, and machine learning/NLP should be its own class.

Overall I enjoyed this course, but I felt there was a disconnect between some of the later assignments and lecture materials. The material in the second half of the course is very dense and I wish some of it was more spread out to gain better understanding. In particular, I wish there was more time dedicated to neural networks and NLP.

Excellent course!

I enjoyed it

The course was ok. It stated strong and interesting. By the end I think everyone was a bit lost. But thanks to the fact that tests are worth so little, assignments are hackable, and there s >10 points Of extra credit, I had little incentive to ever grind and actually learn the material

The content is great and I have learnt a lot. However, maybe partly caused by the exceptionally large class size, I found the course logistic to be kind of messy. To be more specific, I have listed a few problems below as a reference. Videos of lecture were missing / not uploaded to Coursera for several time, and was not fixed after at least one week reported by students. Assigned reading was suddenly changed to other chapters, sometimes even right before the exam . To make matter worse, such changes were often made quietly via one piazza post, without any class-wide announcement . Students have to literally monitor every post on piazza to notice this kind of changes. In week7 s material, many typos and basic logic mistakes are found. Some are fixed in the PDF provided. But there is no caveat or warning in the video. The one that upset me the most is that the lecture introduced a concept wrongly (Horn clauses). I mean there is no way for students who meet the concept for the first time to spot such mistake. TA support was insufficient. At least for the first few weeks in this semester, TAs were not very responsive on piazza. I had once posted a question without getting any kind of feedback for at least one week. Overall, I appreciate professor s effort in helping students to perform well. But I think there is still much room for improvement. I hope all the problems will be fixed and the future cohort will not have to face these kind of logistic issue.

At first there were too few TAs but they added more which was great! I think the last assignment was a bit of a leap in difficulty as well, but overall the course was great!

This course is very interesting and informative and I really enjoyed the course a lot, but I have to say it only provides basic knowledge on AI. As a MCIT student, frankly speaking, the knowledge I learnt from this course is too limited. I also took the Big Data Analytics this semester, which talked little about how AI is applied in data science. I know it's hard to capture all specific topics in just few weeks, but it would be better if each module can provide more details on how we can apply what we learnt to some specific area. As a future data scientist, what I really want to learn from this course is how to improve the data processing and analysis more efficiently through AI and more.

I overall has a positive experience with the course, but it was at times a bit disorganized with changing requirements. In addition, I think there were too many students allowed to enroll.

Very good and challenging course providing a great overview of the different facets and history of artificial intelligence.

The course had extremely interesting material and a very kind grading structure. That alone is enough to make me rate it highly. I did not interact with the TAs, but the professor was very nice and his lectures were very good overall. The material and assignments seemed more disconnected in the second half, and instructions were not as clear. That material was much more complex. There were some logistical issue with the course as well.

The content is interesting and useful. Chris is cute and he explain the content well both in videos and OH. The assignments are challenging, but gives us good opportunity to understand and use knowledge to realize the algorithms. I'd say this course is incredible!

Very nice course!

Great introduction course for artificial intelligence

Since all assignments are graded by autograder, the feedback from autograder is crucial for students to learn. I suggest more detailed feedback particularly in the earlier parts of the assignments so that students can pinpoint where to improve and move on to the more challenging parts. Maybe less hints to give in the later parts of each assignment.

I pretty much telling everyone I know that this is the best course I have taken from MCIT so far. I have learn so much from professor CCB. The homeworks are challenging and the extra credits are interesting.



Term	Summer, 2021 (2021B)	Enrollment	49	School	School of Engineering and Applied Science
Activity Type	ONL	Eligible	49	Division	-
Cross Listed Sections	-	Responses	20	Department	-
		Response Rate	41%	Subject	COMPUTER AND INFORMATION SCI

					This Instructor Only					
Average Ratings					Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.60	3.60	3.60	-	0% 0	0% 0	5% 1	30% 6	65% 13	20
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.00	-	5% 1	0% 0	25% 5	30% 6	40% 8	20
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.84	2.84	2.84	-	0% 0	0% 0	37% 7	42% 8	21% 4	19
<b>4 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.53	3.53	3.53	-	0% 0	0% 0	5% 1	37% 7	58% 11	19
<b>5 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.37	3.37	3.37	-	0% 0	0% 0	11% 2	42% 8	47% 9	19
<b>6 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.37	2.37	2.37	-	5% 1	26% 5	16% 3	32% 6	21% 4	19
<b>7 Accessibility of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.11	2.11	2.11	-	5% 1	26% 5	32% 6	26% 5	11% 2	19
<b>8 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.21	3.21	3.21	-	0% 0	0% 0	21% 4	37% 7	42% 8	19
<b>9 I thought the course instruction prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.16	3.16	3.16	-	0% 0	0% 0	16% 3	53% 10	32% 6	19
<b>10 I thought the practice opportunities prepared me to do well on the graded assignments.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	2.95	2.95	2.95	-	0% 0	5% 1	26% 5	37% 7	32% 6	19
<b>11 Assignments were graded fairly.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	3.56	3.56	3.56	-	0% 0	0% 0	6% 1	33% 6	61% 11	18

					This Instructor Only					Responses
Average Ratings					Worst Rating...Best Rating					
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>12 The TAs and/or Graders provided meaningful feedback on my graded work which allowed me to understand my strengths and weaknesses relative to the material covered.</b> <i>Scale: 0 to 4: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree</i>	2.53	2.53	2.53	-	5% 1	11% 2	32% 6	32% 6	21% 4	19
<b>13 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.00	3.00	3.00	-	0% 0	0% 0	32% 6	37% 7	32% 6	19
<b>14 On average, how much time do you spend each week on the course.</b> <i>Scale: 0 to 6: 1-3 hours, 4-6 hours, 7-10 hours, 11-15 hours, 16-20 hours, More than 20 hours</i>	3.47	3.47	3.47	-	0% 0	0% 0	21% 4	42% 8	21% 4	19
<b>15 Would you recommend this course to another student?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.32	3.32	3.32	-	5% 1	0% 0	5% 1	37% 7	53% 10	19
<b>16 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 19	- -	- -	- -	19

**Comment Suggestion**

I thought the course was really insightful. I found myself getting more lost in the last few weeks due to the more abstract nature of the content. The assignments themselves were not very difficult, but the lecture content was hard to grasp and didn't fully tie in to the assignments? At least, the assignments focus on implementation whereas the lecture was on theory, and that was difficult to bridge.

This is a well organized course.

The course was very thorough in explaining the subject matter. I especially appreciate that the course structure built up to the more complicated elements in the course via other, simpler topics, see BFS to Dijkstra's and A\*, or n-gram to Perceptrons to Convolutional Neural Networks. The professor's enthusiasm for the material was also excellent and encouraging to the students. I think the TAs were very helpful, but not as available as some other courses. The final homework assignment was very interesting but a little rough around the edges.

The instructor stimulated my interest in the topic, was passionate about teaching, available, and kind. One thing that would improve the course for me is to have more responsiveness from TAs on Piazza, and schedule assignment recitations earlier. I needed a lot of time and hand-holding to understand and apply the concepts, but getting quick responses on Piazza and having office hours at a time I was able to attend helped me to succeed despite the steep learning curve. The fact that I really struggled in this course meant I learned so much, and I still enjoyed the experience overall.

I love this course, would strongly recommend it to my fellow course mates. Complex concept are clearly explained by the professor. This course gave me a good introduction to AI and pique my interest to explore deeper.

Excellent course!!

The course is pitched at a good level. I would like the course to go more in depth on some sections but understandably it is not able to because of the breadth. I found the assignments for the earlier sections really helpful because we implemented everything from scratch with minimal structure. However some of the later assignments felt a bit too hand held, as a lot of structure was provided from the MDP class and such. Additionally, some weeks there was no homework where I thought homework would have been useful to cover a topic e.g the bayesian networks. The homework on deep learning was also very weird as the course emphasis was on language but the homework was on computer vision. The TA responses on piazza were generally unhelpful, mostly just restating something from the lecture and not really answer "why" questions.

The best part of this class was that Prof Callison-Burch genuinely cared about the students enrolled in his class. Unfortunately, that is the only positive thing I can say about the experience. I'm very disappointed by the quality when compared to other courses in the MCIT Online program. I'm not sure why any administrator thought it was appropriate to charge full tuition for access to choppy, poor-quality recordings from a previous semester (audio fluctuated from loud to soft or cut off mid-sentence; slides didn't match up with lectures given; etc). I'm also disappointed by the lack of organization and regard for students' time from the course staff. The limited TA office hours and recitations that were held at all were frequently rescheduled, cancelled, or added with less than 24 hours notice, if they were advertised in advance at all (it was impossible to tell what Google Calendar appointments labelled "busy" meant). I was frustrated that any complaint or protest about the quality of the class was met with a "Be patient, it's a new course!" dismissal from administrative staff. An absurd thing to say, considering that this course was announced as an upcoming elective 6 months ago and that everyone involved in planning the course was an experienced course administrator in the MCIT Online program and the course has been taught for many semesters in-person (and has a very popular and positive reputation!).

I've enjoyed the course, especially the assignments. Assignments helped me a lot to understand the concepts. The first 3 weeks contained many repetitions, e.g. we've learned BFS, DFS on CIT 591, 594, and 596 as well, and some other search algorithms on CIT 596, all of them are compulsory core courses. You could allocate some time from this part to the ML and NLP part. Generally, the MCIT program should build on the core courses, since we only study 10 courses total. I recommend publishing EC2 and EC3 earlier in the next iterations. I've missed the robot programming, I will try to do it after the course. The lectures and explanations were clear, but matching them with the textbook was somewhat difficult and confusing when the textbook used different terms and notations. I highly appreciate that the TAs on this course are really knowledgeable and experienced. Thanks to all of the instructors for the course.

Well structured and organized course

TA in the course is not helpful, the comments replied are not useful. They are not all that engaging, at least the ones that answers my piazza post.

Term	Spring, 2021 (2021A)	Enrollment	146	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	146	Division	-						
Cross Listed Sections	-	Responses	139	Department	-						
		Response Rate	95%	Subject	Networked and Social Systems						
Average Ratings											
					This Instructor Only					Responses	
					Worst Rating...Best Rating						
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.29	3.29	3.29	-	1% 1	3% 4	10% 12	40% 50	47% 59	126	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.04	3.04	3.04	-	2% 2	3% 4	21% 26	38% 48	36% 45	125	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	1.85	1.85	1.85	-	1% 1	34% 34	45% 45	17% 17	2% 2	99	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.19	3.19	3.19	-	0% 0	2% 2	16% 15	44% 42	39% 37	96	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.66	2.66	2.66	-	4% 4	11% 10	24% 23	37% 35	24% 23	95	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.21	3.21	3.21	-	1% 1	3% 3	12% 12	41% 40	43% 42	98	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.10	3.10	3.10	-	2% 2	7% 7	16% 16	28% 27	47% 46	98	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.51	2.51	2.51	-	2% 2	10% 9	40% 35	30% 26	18% 16	88	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.73	2.73	2.73	-	1% 1	5% 5	34% 33	40% 39	20% 20	98	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.29	2.29	2.29	-	0% 0	9% 9	60% 59	24% 24	7% 7	99	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.96	2.96	2.96	-	3% 3	2% 2	15% 15	55% 54	24% 24	98	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.40	2.40	2.40	-	6% 6	12% 12	28% 27	42% 41	11% 11	97	
24 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	1.00	-	-	-	0% 0	100% 80	- -	- -	- -	80	

**Comment Suggestion**

I think the final report requirements were not a great fit for a lot of projects, but instructor staff was available via piazza to clarify/modify expectations

I love this course, although there are times when the work is a lot

A lot of work and not very useful

Crowd-sourcing and Human Computation is a fun class for those interested in solving computational problems that neither humans nor computers are good at solving by themselves. It is a fun and interesting class and I recommend it to CIS majors who find crowd-sourcing and or NLP interesting.

Biggest critique is confusion on deadlines and communicating to students. Oftentimes people were confused about aspects of the assignment or there were errors in the released assignment. The final project had repetitive deliverables that could potentially be cut to save time. For instance, reexplaining the project, a bunch of readmes, and the videos for sandbox weren't that helpful.

things got super busy towards the first few weeks of April, which wasn't too pleasant for a lot of students. i really commend the professor for being flexible with us though, even though making a lot of accommodations. useful skills taught. tas need to be more active in the queue though, accessible but tas often miss shifts and take forever to get to you. made april even harder

The class is very intersting and introduces us to a lot of interesting research in the field. Homeworks are fun ways to learn more about the field and become both Workers and Requesters ourselves!

Interesting course with a fresh perspective on how the crowd can be helpful in CS. Learned a lot and would try to apply it in the future.

Neat class, the final project was a bit daunting but nevertheless I learned a lot.

**Instructor Comment**

The instructor was very nice, encouraging, and helpful.

I

Course was poorly organized and TAs would not respond to students' questions

Incredibly empathetic and friendly to us. Such a good teacher

Very passionate about subject

CCB has a fantastic outlook on crowd-sourcing and NLP. It was really a pleasure to learn from such a distinguished professor and researcher such as him. I learned a lot from his lectures as well as enjoyed all of the interesting guest speakers he was able to secure.

I really enjoyed this course and it made me more interested in crowdsourcing and also your field of natural language processing. This course was taught very well, especially given the virtual circumstances and I learned a lot this semester. Thank you so much!

Extremely understanding and flexible which was appreciated. Passion for the topic and listening to course feedback such as implementing a discussion during the lecture was benefical.

such an amicable and kind professor

really picqued interest in the beginning. enjoyable

Loved NETS213! I think it's important to have classes like these in the CIS curriculum to show different areas of the field. I learned a lot about crowdsourcing and became very interested in the different problems and research topics in the field. I also enjoyed the guest lectures and several of the assignments were very valuable. I think the class could have benefitted from more structure (lecture notes, schedule of topics beforehand, etc). The final project also has too many milestones.

CCB is an amazing Professor. He has a great understanding of the subject and can communicate it very well. All the lectures were interesting and the guest speakers brought a lot of interesting perspectives.

He delivers the course content in an interesting and easy-to-understand way, great prof!

Even outside of the regular content, there were a lot of topics and research that professor CCB brought to the class and I think that excited me a lot.



Term	Fall, 2020 (2020C)	Enrollment	197	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	197	Division	-
Cross Listed Sections	CIS 521401	Responses	192	Department	-
		Response Rate	97%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.26	3.26	3.26	-	1% 2	3% 6	15% 28	30% 55	51% 94	185
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.13	3.13	3.13	-	1% 1	4% 8	17% 31	38% 69	40% 74	183
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.22	2.22	2.22	-	3% 5	10% 16	50% 77	33% 50	3% 5	153
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.11	3.11	3.11	-	1% 1	3% 4	19% 29	40% 61	37% 56	151
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.73	2.73	2.73	-	3% 4	7% 10	28% 42	41% 61	22% 33	150
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.14	3.14	3.14	-	1% 1	3% 4	16% 24	44% 67	37% 56	152
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.06	3.06	3.06	-	1% 2	7% 10	17% 25	36% 54	40% 60	151
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.56	2.56	2.56	-	3% 4	14% 21	29% 44	34% 51	21% 31	151
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.97	2.97	2.97	-	1% 2	2% 3	24% 36	44% 68	29% 44	153
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.46	2.46	2.46	-	1% 1	3% 5	51% 78	39% 60	6% 9	153
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.16	3.16	3.16	-	1% 1	1% 1	14% 21	51% 78	34% 51	152
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.32	2.32	2.32	-	6% 9	13% 19	34% 51	37% 55	10% 15	149
<b>13 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 131	- -	- -	- -	131

### Cheating Comment

it's online I imagine people cheated

-

N/A

### Comment Suggestion

Course was great, online learning was not.

Overall, one of the better online courses I've taken. Very well organized and responsive on piazza. Weekly quizzes were fairly irritating/not super helpful. Otherwise everything was great. Maybe if Professor deviated from the slides a little more in lecture that would be helpful. The lectures could get slow at times as it became more of reading the slides.

I really liked the course! One potential concern I had is that since a lot of people did the extra credit R2D2 assignments, it may negatively impact those who didn't do the extra credit - I mostly just worry because some people might not have had access to the R2D2 due to location or finances. Another mini thing is that sometimes there were a few logistical miscommunications/coordination issues with the homework and lecture schedule.

This class was great! The homeworks were doable, fun, and interesting. I took it Pass/Fail, but I felt like the grading was fair - it is hard to do poorly if you put in the work, but it also takes superior performance to get an A or A+. I probably won't use the course material in real life, but I just had a lot of fun and enjoyed the course a lot. Thanks CCB!

Amazing

I really enjoyed in the course in general, the TAs are very active and we could ask them questions during office hours. I really enjoyed taking the class this semester, and I really broadened my knowledge as a new comer. The first part of the course contains more work than the second half, and if the course could mitigate this slight imbalance it would be even better.

Very good class!

This class was not synchronous or curved and I think both of those are excellent ideas. I appreciated that homeworks, which made up the vast majority of the time spent on this class, were given proportional weighting, especially in a time like this, where exams can't really be administered properly. I liked the "honesty" of the autograder, where you didn't have to worry about hidden tests, and could be comfortable that your implementation is good if you can get past the autograder. All-in-all, this class felt designed as well as possible to let students learn and apply skills in an as comfortable as possible environment, and I appreciate that greatly.

Would love to take it again:)

I don't think that this course is structured in the best way, many times homeworks are released but we haven't covered the content yet in class. So we are just expected to learn it ourselves to do the homework. There is an insane amount of reading to do for this class, and the professor likes to test on all the tiny tricky details in the book that he never mentioned in class instead of testing whether we understood the concepts. There are so many questions not answered on Piazza, the professor almost never responds to Piazza post unless it's a logistics question..

CCB is great and accomodating!

Certain parts of the course were a little disorganized, and the TAs tended to be kind of rude towards students. However, it was an enjoyable course overall!

Great class, highly recommend :)

Course website is not updated (the timeline has past year's dates and information mixed with this year's), course website vs syllabus have conflicting information with course website being wrong. However, course website is the only place we can get information about course recordings, homeworks, etc. The course requires a large amount of out-side-of-class learning. About half of the quiz / exam questions are based on the textbook and not covered in lecture.

learned some cool stuff! the assignments were cool sometimes

The textbook is very informative.

A very good survey course to the broad AI area. Lectures are excellent but I definitely hope the quizzes and homework are more organized. It happens more than once that after i finished the quizzes, some of the multiply choice questions got changed without notification.

Rlly good

I really enjoyed taking this course. For years, I have been interested in learning about artificial intelligence, and I liked how this course gave me and my classmates a broad and thorough overview of artificial intelligence from the perspective of thinking about "logical agents." I particularly enjoyed the opportunity to extend our knowledge using extra credit assignments with the R2D2 and beyond given the plentiful applications of the topics we have studied. I thought that the use of GatherTown for office hours at the beginning of the semester did not offer the best experience, but I appreciated the instructors' flexibility and willingness to switch to OHQ when it was clear that it had become the superior option. I think it was an interesting decision to use the slides and assignments from UC Berkeley's similar course for a few of the topics towards the middle of the course. I really liked the use of the autograder with all public test cases, as it allowed us to keep working until we reached a grade that we were happy with and get feedback along the way about what was expected from us from each assignment. Given the pandemic, I thought the course adapted well to the fully virtual format and I appreciate how we were allowed to work with partners for some of the homework assignments to decrease our stress levels. I additionally like how the course fostered civic engagement by offering extra credit for voting in this important election. Overall, I really enjoyed this course and would definitely recommend that other students take it in the future.

TAs oftentimes don't know what they're doing and take way too long to help each student.

-

Great course to get introduced to Artificial Intelligence, both in the theoretical aspect as well as the practical aspects. The weekly programming assignments were of very high quality.

Overall, this is a great class as an intro to AI.

#### Instructor Comment

You did great professor. Online learning is arduous and even more so online teaching. You kept it stimulating and were always there with full energy. Wish I could have had you in person before graduating.

I learned a lot this semester and appreciated the frequent Piazza updates.

Very nice and approachable! It was nice to see a friendly face over Zoom.

CCB really cares about his students and was great to learn from.

Excellent

Professor Callison-Burch is a great lecturer with engaging class materials & powerpoints. The class was also incredibly well structured. All due dates and guidelines were made very clear from the first day of class, and the professor was very kind, understanding, and helpful during virtual learning.

Really enjoyed the way Dr. Callison-Burch taught the course, the materials were very informative especially for students with limited CS knowledge. Dr. Callison-Burch is very approachable, and students could easily ask him questions during office hours. The second half of the course had a focus on NLP, and Dr. Callison-Burch's personal background was especially helpful in terms of leading the lectures.

Professor Callison-Burch is an excellent professor, who clearly cares about his students and puts in the extra time to help make his course interesting. He took the time to present every lecture in person which is not easy and did his best to connect to students whenever possible. I would highly recommend this course to anyone interested in the domain of AI.

He really wastes a lot of time going over things that people should already know (Python, basic arithmetic, logic theory). CCB clearly cares very much about this course and his passion shows through, I'm just not sure if this should be 400/500 level course since there really isn't much work or much information contained in the course.

Prof. Callison-Burch is very passionate about the subject areas and has been very good at stimulating students' interests.

His enthusiasm really takes the class above and beyond

Prof. Callison-Burch was something of a comforting presence this semester. Though the course content was somewhat challenging, his lectures usually provided a gentle enough introduction to various complex topics that allowed people who were never exposed to anything remotely like this subject matter get a foothold. He was also very receptive to questions and very thorough in answering them, which deserves to be known.

Wonderful professor. Did an incredible job adjusting to COVID conditions

I could tell he was very excited about the material, especially NLP, which made the class fun. He also really cared about the students' well-being. I thought it was great that he gave us time off to vote.

I also don't think that lecture was taught properly, most of the times I feel the professor is just reading off the slides. The examples on paper towards the end of the class were helpful though. I don't understand the point of making future homeworks visible on the website when you specifically mention that they will be changed. The dates on the schedule on the course website have been messed up the entire semester, it has been so confusing to understand what's going on there. This is a difficult time for all of us, I think the professor could try to be a bit more considerate, we have a lecture on the day the midterm is released and the material on that day is covered on the exam ?!

It was obvious that he really cares about the course and students, which was amazing to see.

Great Prof, felt that he genuinely cared about the students

Very nice and understanding! Chris is also very aware of mental health and is great at explaining things!

Please start the course with material more like the end of the course. I was not engaged by the less relevant topics and topics that were too easy, almost everything until the last month, and lost interest in the course early on. In contrast, your lectures on NLP were much more engaging and neural nets homeworks were more applicable.

He is good

Second class I took with him, definitely worth it!

The professor is very enthusiastic about the subject and hence a very good lecturer. Terms are explained really clear.

CCB has always been really thoughtful throughout the semester

CCB is great! Really enjoyed being his student and he really puts in a lot of effort in his class.

Thank you so much Professor CCB! It was a pleasure taking this class :) Probably one of my favorite classes ever taken in my 4 years here!

I thought Professor Callison-Burch did a great job teaching this course. I liked how he stimulated students' interest by connecting the course material to new developments in the blossoming artificial intelligence industry. I thought his lectures were very engaging and enjoyed how he connected a lot of the course material to his cutting-edge NLP research. I also liked how he gave us a window into the work of his students through the KAIROS extra credit assignment.

-

Professor Callison-Burch is great at communicating the subject matter and stimulating student interest. He is especially passionate about his research field and this can be felt during his lectures.

The professor is very supportive and engages students in distance learning. I appreciate the effort he put through class and talk about what we can improve for learnings at remote settings.

Overall, I think Professor Callison-Burch is a great teacher for this subject matter. His passion for the subject really stimulus student's interests and he always encourages students to pursue more in the field in a very positive way. Overall, I think he is a great professor.

CCB really explains the concept step by step and takes enough time to let the students understand the material.

Term	Spring, 2020 (2020A)	Enrollment	123	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	123	Division	-
Cross Listed Sections	-	Responses	101	Department	-
		Response Rate	82%	Subject	COMPUTER AND INFORMATION SCI

Average Ratings					This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.34	3.34	3.34	-	1% 1	0% 0	15% 15	31% 31	53% 52	99
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.23	3.23	3.23	-	1% 1	3% 3	16% 16	31% 31	48% 48	99
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.42	2.42	2.42	-	1% 1	6% 5	47% 39	41% 34	5% 4	83
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.36	3.36	3.36	-	0% 0	2% 2	9% 7	40% 32	49% 40	81
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.93	2.93	2.93	-	1% 1	4% 3	24% 19	44% 35	28% 22	80
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.31	3.31	3.31	-	0% 0	2% 2	11% 9	40% 33	47% 39	83
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.17	3.17	3.17	-	0% 0	4% 3	22% 18	29% 24	46% 38	83
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.12	3.12	3.12	-	1% 1	4% 3	18% 15	35% 29	41% 34	82
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.14	3.14	3.14	-	0% 0	5% 4	14% 12	42% 35	39% 32	83
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.88	2.88	2.88	-	0% 0	1% 1	31% 26	46% 38	22% 18	83
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.23	3.23	3.23	-	0% 0	1% 1	13% 11	47% 39	39% 32	83
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.37	2.37	2.37	-	10% 8	12% 10	27% 22	35% 29	17% 14	83
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 70	- -	- -	- -	70

**Cheating Comment**

no

**Comment Suggestion**

The class was very well organized and the transition to online was handled very well. The course materials were very robust and the powerpoints were very helpful study materials. Constructively, I think the quiz questions were a bit ambiguous some times; I spent more time trying to figure out the what each question was asking for rather than reviewing the content. I found all the assignments interesting and meaningful. I do think it was paced very quickly; as someone with not a ton of exposure to these topic before class, I had a bit of trouble getting through all the assignments quickly while also digesting the information at the same; it would have been nice to have a little more time to work on each assignment (although logistically, I'm not sure how feasible it would be to fit all of them into the semester. I found all of them interesting and meaningful, even the ones added on to the end.)

Fantastic Course

Was not a fan of the reading quizzes but otherwise good class!

some workload but very rewarding

Homeworks weekly maybe a bit much, but as compared to some other CIS courses nothing insane. Quizzes need to be more standardized, perhaps two TAs working on a quiz a week.

As an undergraduate taking this graduate class, I definitely struggled, but with a homework partner it was okay. The homeworks were (mostly) interesting and valuable in teaching me what I couldn't absorb in lecture. I confess I didn't do all the readings, but the ones I did do were very helpful in fleshing out the material. This was a valuable learning experience for me, but I wouldn't recommend it to other undergraduates.

Very interesting material with a very good textbook. Exercises are useful in gaining some practical familiarity with the topic (although, they were a bit cookie-cutter). Lectures were not super useful.

Good course for learning NLP tools. But the HW and Class contents are not strongly related.

Even I am familiar with linguistics itself, I gain a lot from the lectures, and also the homeworks.

Overall I loved this course and got to learn a lot. It would be nice if Penn could have an Advanced Computational Linguistic course for NLP enthusiasts.

The course is great! I have some suggestions: (1) Weekly assignments are just too stressful. I think if we have more time to do the homework, we can have deeper understanding to each topic we meet. (2) I am so curious about the model of those teams who did well in the leaderboard. I think we could learn more if there are some discussion and sharing parts!

The course was very interesting and I loved doing the homeworks as they were a great platform to test our understanding of the lecture content and readings. I was not a huge fan of the quiz though, lot of ambiguity and open-endedness. Also, I took the course after taking 519 which really really helped. Without 519, I might have struggled with a lot of the concepts.

The course is great overall with ample amount of practice quizzes and assignments. At the same time, it can also be hard to manage the work load and requires continuous effort and dedication.

Very well designed course. The course covers almost all the aspects of NLP and the range of topics from 0-100 is fantastic. The homeworks promote learning through application and very helpful.

**Instructor Comment**

The professor is really engaged and passionate about the subject and it makes the overall learning experience much more fun and enjoyable. Would take another class with him if the opportunity ever presents itself!

This is one of my favorite courses I have taken at Penn and a lot of that is due to Professor Callison-Burch. While being extremely knowledgeable and intelligent, he was able to simplify many of the concepts to be accessible. Penn has many intelligent professors but it is rare to find one who can both know so much and explain material so understandably.

Very nice and accommodating - handled the transition to virtual classes really well!



Good lectures and pretty approachable prof.

Very intuitive teacher. Order of the course can sometimes be a bit lackluster. Also, would prefer to go more into the details in course rather than relying more on the reading to learn the details.

I can tell the professor truly cares about his students. He makes every effort to explain the material both inside and outside of class, takes time on the more difficult assignments, and is very accommodating. He explains the concepts well, and is well-organized. I'm glad I was able to take the class with him this semester.

Professor Callison-Burch is incredible knowledgeable and his lectures are generally quite engaging. He was also very understanding when the class got moved online and I really appreciated that.

The lectures largely repeated what was in the readings. They also lacked organization at times, and were not especially captivating. I found that most of the value of the class came from doing exercises and the assigned readings. Attending class was not very useful.

He's a good instructor. HW assignments are interesting.

I love CCB! A kind and intelligent instructor.

I think the Professor is pretty good and approachable, with a lot of wonderful things to share with students

Amazing professor.

Wonderful

The professor is excellent! He is a real expert in NLP. And he is always caring and considerate!

Explains well in class, easily approachable and encouraging

amazing class, glad that the class size increased.

The instructor is well-prepared for the class's materials and ready to answer any types of questions during class.

He is on the kindest professors I have taken a course with in Penn. He is very understanding of student's needs. And he is extremely knowledgeable in his field and delivers lectures with clarity.

Professor Callison-Burch is an amazing teacher. He brings a lot of positivity into the class and engages in topics with a touch of humor. He also makes us aware of the history of several techniques and how different people have contributed to it, which is very interesting.

CCB was superb.

Term	Spring, 2020 (2020A)	Enrollment	23	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	23	Division	-						
Cross Listed Sections	-	Responses	22	Department	-						
		Response Rate	96%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
This Instructor Only											
Worst Rating...Best Rating											
Responses											
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.27	3.27	3.61	-	0% 0	5% 1	18% 4	23% 5	55% 12	22	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.05	3.05	3.45	-	0% 0	5% 1	32% 7	18% 4	45% 10	22	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	1.94	1.94	2.30	-	13% 2	6% 1	56% 9	25% 4	0% 0	16	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.38	3.38	3.53	-	0% 0	0% 0	13% 2	38% 6	50% 8	16	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.47	3.47	3.41	-	0% 0	0% 0	13% 2	27% 4	60% 9	15	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.13	3.13	3.56	-	0% 0	6% 1	19% 3	31% 5	44% 7	16	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.31	3.31	3.51	-	0% 0	0% 0	25% 4	19% 3	56% 9	16	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.87	2.87	3.37	-	0% 0	7% 1	40% 6	13% 2	40% 6	15	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.75	2.75	3.26	-	0% 0	13% 2	19% 3	50% 8	19% 3	16	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.00	2.00	2.01	-	0% 0	19% 3	69% 11	6% 1	6% 1	16	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	3.00	3.00	3.20	-	0% 0	6% 1	19% 3	44% 7	31% 5	16	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.19	2.19	1.82	-	6% 1	25% 4	38% 6	6% 1	25% 4	16	
24 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	1.00	-	-	-	0% 0	100% 16	- -	- -	- -	16	

**Comment Suggestion**

First homework was fun and set the pace for the course, but looking back it was a little unnecessary. Second homework was great but it did feel a little shallow, I feel like much more could have been done with it expanding on the concept of adding NLP aspects to games. Third and Fourth homeworks were awesome and interesting but were unfortunately limited due to the class expertise. This class has lots of potential with regards to assignments and I hope it's offered again to let students really explore the field. I was hoping we would do a hw2-esque addition with really complicated generation systems, really get into the weeds of the sampling and show how to selectively sample or do some exploration of how classical techniques can be used in conjunction with this deep learning stuff.

Very interesting course covering major topics of NLP applied to text based games. Could have more homework focusing on some state of the art technology like GPT, transformer and NLP with deep learning.

**Instructor Comment**

Daphne and Chris were a great duo. The guest lectures given in the class were fantastic and the material was very engaging. I particularly enjoyed the paper presentations and the general interactivity of the lectures. The teaching staff did a great job of balancing lecture with interactivity and engaging the students. Daphne was great with giving student with questions time to ask those questions and she truly excels at breaking down complicated topics into concise answers. I almost would go as far as to say I learned more from her question answers than her lectures -- as they can get very dense during the meaty parts. One suggestion would be to split up the dense portions of the lectures with illustrated examples or whiteboard drawings; just spend more time and go more carefully into the heavy math sections to make sure everyone is following along. I found that if my attention wandered for even 5 minutes or I took a bathroom break I'd be done for for the rest of a difficult lecture because of the density.

Term	Fall, 2019 (2019C)	Enrollment	148	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	148	Division	-						
Cross Listed Sections	CIS 521401	Responses	145	Department	-						
		Response Rate	98%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
				This Instructor Only						Responses	
				Worst Rating...Best Rating							
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.30	3.30	3.30	-	0% 0	1% 2	12% 16	42% 59	45% 62	139	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.11	3.11	3.11	-	0% 0	4% 5	20% 28	38% 52	38% 53	138	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	2.49	2.49	2.49	-	0% 0	7% 8	45% 49	40% 44	8% 9	110	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.28	3.28	3.28	-	0% 0	2% 2	15% 16	38% 41	46% 50	109	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.54	2.54	2.54	-	6% 6	8% 9	33% 35	33% 35	21% 22	107	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.12	3.12	3.12	-	0% 0	3% 3	20% 22	40% 44	37% 41	110	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	3.15	3.15	3.15	-	0% 0	5% 5	18% 20	35% 39	42% 46	110	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.70	2.70	2.70	-	4% 4	8% 9	25% 27	41% 45	22% 24	109	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.92	2.92	2.92	-	0% 0	6% 6	25% 27	42% 46	28% 30	109	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.50	2.50	2.50	-	0% 0	5% 6	50% 55	35% 39	10% 11	111	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	3.16	3.16	3.16	-	0% 0	2% 2	18% 20	42% 47	38% 42	111	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.62	2.62	2.62	-	1% 1	11% 12	32% 35	39% 43	18% 20	111	
24 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	0.95	-	-	-	5% 5	95% 90	- -	- -	- -	95	

### Cheating Comment

assignments are taken from other universities, and solutions are on github.

N/A

Instructors said that they detected cheating in coding assignment.

NO

People debugging each other's code

It's project based course so probably no cheating

### Comment Suggestion

Cool course that encompasses decision making and machine learning.

Practice exams don't seem indicative of the actual exams and last hw's material was not taught at all before the assignment was due.. Otherwise interesting though heavy focus on NLP applications - wished there were other applications discussed too.

Jie Gao should not be a TA for this course. Overall, the TAs for this course were REALLY bad!

I learned so much. I look forward to continuing to take AI related courses at Penn!

This is a great course. The homeworks are all fun and didn't ask too much. The TAs were active on piazza which was helpful.

really interesting overview of AI with an emphasis on computational linguistics

I loved this course. It gave a great overview of how to think about AI more broadly as intelligent agents, and how those broad ideas manifest in computer science through search, machine learning, and more.

The wording on exams is usually unclear. There are often small errors in practice exams and exam grading.

I think it's a pretty solid application class.

Best class I've taken at Penn- perfect workload (not too easy not too hard), lots of practical knowledge, interesting homeworks that are fun to complete, and an amazing professor

Great course that covers the breadth of the field artificial intelligence. Very good for students to figure out what their particular interests are in the field.

A really good course

My one gripe about this course is the grading. In many cases, many people seemed to lose credit on silly misunderstandings/miscommunications that could easily have been rectified, but the TAs were often reluctant to admit that there had been a mistake.

Instructor is nice but not the TAs. Responses on piazza were very slow, compare to other courses. And there are too many readings, I mean readings are good but some materials were not covered in lecture but were on the exam. I mean it is good to have that many readings but wish the exams are opened book or allowed students bring more cheat-sheets to exams. The ability of memorize huge amount of information should not be tested on such course (which has a huge impact on our grade).

This course does a fair job of giving a broad introduction to AI, broadly defined. But the side effect is the lack of depth. This is especially true towards the machine learning part, which is not covered in great depth and makes me quite confused why the algorithm is what it is. The lecture is quite easy to follow and entertaining but there is a significant amount of stuff that is on the readings but not covered in class. We were told that exams would also cover those topics, which makes studying for the exams a bit tough. Piazza monitoring could potentially be improved as well, as some posts were left unanswered. But overall, I think this is a good course for those who want a broad introduction to AI.

Class is excellent. Maybe we could cover narrower and deeper content in the very beginning of the semester.

Amazing course. Great assignments. Lots of coding. One learns a lot

**Instructor Comment**

don't like how there's a lot of info based on readings. the textbook was pretty bad. the later textbook that was online by stanford was pretty good.

Strongly recommend if you are interested in knowing various aspects of artificial intelligence.

Interesting lectures.

This course inspired me to sign up for more NLP courses in the spring!

- Content material interesting - Choice of textbooks/readings informative My main comment is that I felt that the homeworks perhaps did not focus enough on the lecture content. I felt that the main difficulty in them was the programming, rather than understanding the concepts (although this may be natural). I think a split half/half between programming assignments and written assignments (e.g. problem sets) would more thoroughly and cumulatively test the content.

Would always take it again and will recommend it to other exchange students.

I think we should have written assignments that serve as the exercises for the reading besides the programming assignments because they can help students prepare for exams and strengthen the understanding of the materials. Overall the course is pretty fun.

Good teacher, sometimes starts class with a cool relevant video, seems to want people to learn and enjoy.

Hi is clearly very intelligent and has a lot of knowledge, but babies his students a little. The course could be more mathematical and challenging to make it more interesting.

Makes material accessible and reasonable about deadlines.

Professor Callison-Burch is awesome!

Inspirational!

CCB was a great professor! Adds fun elements to his lectures like relevant videos. I am a huge fan of this class and his teaching style. Happy he also included lots of extra credit. The one complain I had is that CCB does not post on Piazza frequently and the TA's were quite unresponsive on Piazza. It would take days and sometime the TA's would just never respond, even on days before a midterm or days a HW was due.

Professor Callison-Burch did a great job during lectures to keep the class interested and add some humour to our subjects. He communicated the material well and gave a thorough description of what each subject was and why it matters.

Enthusiastic, entertaining, and very knowledgeable.

Love him.

One of my favorite professor at Penn. Thank you for being a great professor! Lectures were really interesting and well prepared. Learned a lot. He genuinely cares about his students!

CCB is an excellent teacher. He explains concepts intuitively and uses the textbook, slides, and homeworks well to reinforce ideas.

I really liked his enthusiasm for the class!

By far the best professor I ve ever had. He did an amazing job with this class. I ve been at penn 5 years and CCB is just on a level above every other CIS professor I ve had in terms of teaching ability, ability to get students interested, and ability to give students useful skills they ll remember

A really good professor.

Funny and personable, made lectures entertaining, and was responsive to students.

Chris is a great professor. Only suggestion is, there is too much information on the assigned readings that we never covered in class. That also happens to be the most challenging parts of the class. It's very unfair to make us learn these on our own.

Professor Callison-Burch is a greater instructor that conveys the concepts very well in class. It is also a joy to attend his lecture. He is also very understanding and approachable.

Very Interesting and Nice Teacher. A lot of jokes in classes.

Excellent communication.

Great Professor! The course was run in a very structured way. He is very much accessible and provides timely notifications very smoothly. He keeps you informed, gives great hands on assignments. Very regular and keeps you on the toes that s a great plus point. He systematically increases difficulty levels and gives assignments that build up on concepts learned thus far. Makes you very efficient and skilled. Highly recommended!

very responsive to students, hope could go into more detail during lectures

Very interesting professor, teaching style is good, very approachable

Very fun

Knowledgeable, and approachable. I think some more clear emphasis on lecture outcomes and a more obvious structuring would be helpful in providing context for students.

Very good lecturer. I loved his octopus costume!

Awesome course, I loved the EC assignments, as well as the choice of topics.

You are very engaging during lectures and passionate about the course materials, especially the NLP materials. I learn a lot from your lectures.



Term	Summer, 2019 (2019B)	Enrollment	36	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	34	Division	-
Cross Listed Sections	CIS 521920	Responses	13	Department	-
		Response Rate	38%	Subject	COMPUTER AND INFORMATION SCI

Average Ratings					This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.00	-	0% 0	8% 1	15% 2	46% 6	31% 4	13
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.92	2.92	2.92	-	0% 0	8% 1	15% 2	54% 7	23% 3	13
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.83	2.83	2.83	-	0% 0	0% 0	25% 3	67% 8	8% 1	12
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.17	3.17	3.17	-	0% 0	8% 1	8% 1	42% 5	42% 5	12
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.42	2.42	2.42	-	0% 0	17% 2	33% 4	42% 5	8% 1	12
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.00	-	0% 0	0% 0	25% 3	50% 6	25% 3	12
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.08	3.08	3.08	-	0% 0	0% 0	25% 3	42% 5	33% 4	12
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.67	2.67	2.67	-	8% 1	0% 0	33% 4	33% 4	25% 3	12
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.91	2.91	2.91	-	0% 0	0% 0	36% 4	36% 4	27% 3	11
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.00	3.00	3.00	-	0% 0	0% 0	25% 3	50% 6	25% 3	12
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.00	3.00	3.00	-	0% 0	0% 0	17% 2	67% 8	17% 2	12
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.33	2.33	2.33	-	17% 2	0% 0	33% 4	33% 4	17% 2	12

Term	Spring, 2019 (2019A)	Enrollment	75	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	75	Division	-
Cross Listed Sections	-	Responses	74	Department	-
		Response Rate	99%	Subject	COMPUTER AND INFORMATION SCI

Average Ratings					This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.96	2.96	2.96	-	0% 0	4% 3	26% 19	40% 29	30% 22	73
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.78	2.78	2.78	-	4% 3	5% 4	26% 19	37% 27	27% 20	73
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.60	2.60	2.60	-	0% 0	4% 2	45% 25	38% 21	13% 7	55
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.13	3.13	3.13	-	0% 0	4% 2	15% 8	45% 24	36% 19	53
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.53	2.53	2.53	-	4% 2	11% 6	32% 17	34% 18	19% 10	53
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.02	3.02	3.02	-	0% 0	4% 2	24% 13	40% 22	33% 18	55
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.84	2.84	2.84	-	2% 1	11% 6	22% 12	33% 18	33% 18	55
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.79	2.79	2.79	-	0% 0	11% 6	32% 17	23% 12	34% 18	53
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.02	3.02	3.02	-	0% 0	7% 4	20% 11	36% 20	36% 20	55
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.85	2.85	2.85	-	0% 0	0% 0	36% 20	42% 23	22% 12	55
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.04	3.04	3.04	-	2% 1	2% 1	13% 7	58% 32	25% 14	55
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.00	2.00	2.00	-	9% 5	16% 9	44% 24	27% 15	4% 2	55
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 47	- -	- -	- -	47

### Comment Suggestion

Great course, I loved the material and the difficulty was perfect. I especially really loved all of the guest lectures Professor Callison Burch brought in. There were many very well known researchers that we were able to hear from and it heavily contributed to my decision this semester to go into academia

I really liked that each homework had an associated writeup. Some of the quiz questions had ambiguous answers. The "choose all that apply" type questions were especially frustrating. There were a few times where I selected all but one of the correct answers and got 0 credit. Some of the homework assignments had unclear instructions or were poorly written, so much so that I spent more time interpreting the assignment than actually doing it.

Cool course the TA staff was a mess and I wrote about that in the separate cis 530 survey, so won't reiterate. But the content is cool, and you really get a feel for what state of the art looks like in this field right now! Loved the guest lectures as they made the content feel even more applicable we met the people who had made these groundbreaking discoveries sometimes within just the past year! Clearly a cutting edge course with solid homework assignments. Not too much work, but you learn a lot. Also really appreciated the lower stress reading quizzes as opposed to actual midterms I think I learned and engaged deeper because the stress was off, but I still had an incentive to learn.

This course involved more ML than expected (i.e. the assignment on RNN's) without really going in depth to how the models work. I found this to detract from my learning experience, since I didn't really know what was going on at some points...

Decent class

The main issue with this course was the quality of the homework assignments, particularly in the second half of the course. Some were clearly created haphazardly, or were literally modifications of online tutorials or publicly available github repos. These homeworks were many times not very clear in their instructions, and sometimes relied on libraries which were given no explanation beyond what was available in an online tutorial (ie the Pytorch assignment). Additionally, it appeared as though one TA at a time would handle a given week's homework, and as a result only one TA would be available on Piazza to respond to questions, which greatly limited the promptness of feedback.

The concepts were cool but the homeworks were overwhelming as they were weekly and took quite a while

I really liked this course and it helped motivate me to explore the field more and perhaps go to grad school for the topic.

I thought the variety of topics touched varied a lot which I really appreciated. The homeworks were also really fun although they took a lot of work to get done, or at least it felt like it since the sample reports released in the beginning seemed very daunting. It would also be great if time for the final project was increased.

Amazing experience.

Felt like the assignments were supposed to be for someone with little coding experience but then parts of the assignments ended up requiring a high level of coding experience. I think that tweaking the assignments to a clearer target audience would greatly improve the course

### Instructor Comment

Great instructor. He's obviously very passionate about the class material and it shows.

CCB is amazing. Not the most exciting lecturer, but if you're okay with that he is doing some really interesting work and clearly knows a lot about it. He's also able to communicate and teach the content in a clear way (even if it ends up being somewhat dry). He also clearly cares a lot about his students and their learning, and goes out of his way to provide learning opportunities and chances for students to go above and beyond and learn more. Really down to earth and approachable too, which makes asking for help easy. This is my third class with CCB so clearly am a fan but would take more!

I like that Prof. CCB made connections between this course and his other course (NETS213). He definitely has a lot of knowledge/passion for the topic but I definitely learned more from the homework assignments than lectures.

Interesting course, a little bit dry sometimes.

Overall a great professor and clearly passionate about the course content.

Was very invested in student projects which was a pleasant surprise. Feedback given in google form otherwise.

Professor Callison Burch is deliberate in his teaching style and is incredibly understanding. He speaks slowly in lecture to ensure that students understand the course concepts.

Professor Callison Burch was extremely interesting and did a GREAT job at exposing us to the field and preparing us to begin work in it. After the fundamental topics he showed us lots of directions the field can be used for and brought in guest speakers who are experts in the field to present on them.

I really enjoyed the nature of the instructors lectures in terms of the variety of topics and the abundance of guest lectures as well. There's something so unique about not just learning content from a textbook but actually learning it from people that are closely invested in it.

He is a great professor and stimulates interest in the subject matter. He is pro active in arranging good Tech Talks which help students gain knowledge about current research areas.

Great person, knows how to spark interest in a cool, fun manner.

Very enthusiastic and creatively thinks about his field

Had great clarity. Conducted so many guest lectures.

Term	Spring, 2019 (2019A)	Enrollment	59	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	59	Division	-
Cross Listed Sections	-	Responses	57	Department	-
		Response Rate	97%	Subject	Networked and Social Systems

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.73	2.73	2.73	-	4% 2	4% 2	36% 20	29% 16	27% 15	55
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.52	2.52	2.52	-	7% 4	6% 3	37% 20	28% 15	22% 12	54
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	1.86	1.86	1.86	-	11% 5	30% 13	30% 13	20% 9	9% 4	44
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.91	2.91	2.91	-	0% 0	5% 2	27% 12	41% 18	27% 12	44
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.09	2.09	2.09	-	7% 3	20% 9	36% 16	30% 13	7% 3	44
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.88	2.88	2.88	-	2% 1	2% 1	23% 10	49% 21	23% 10	43
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.23	2.23	2.23	-	0% 0	33% 14	26% 11	28% 12	14% 6	43
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	1.98	1.98	1.98	-	5% 2	21% 9	50% 21	19% 8	5% 2	42
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.34	2.34	2.34	-	5% 2	11% 5	41% 18	32% 14	11% 5	44
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.09	2.09	2.09	-	5% 2	11% 5	61% 27	16% 7	7% 3	44
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.72	2.72	2.72	-	5% 2	5% 2	28% 12	40% 17	23% 10	43
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.09	2.09	2.09	-	11% 5	11% 5	41% 18	30% 13	7% 3	44
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.98	-	-	-	3% 1	98% 39	- -	- -	- -	40

**Comment Suggestion**

do not take unless you have javascript and python experience

Excellent course. The subject matter is very practical and interesting. I loved working on the final project and seeing all the creative things other people worked on.

Good class.

I would have liked to see more examples of crowdsourcing in industry! The course definitely covers an interesting topic in the field of CS.

Programming homeworks were quite involved, and I learned a lot from those.

Homework s way to hard

I enjoyed the course and I think there is a lot of value to be had in this topics. I think if you put more of the applications of crowdsourcing first like NLP and the cool projects at the beginning then people would be more inspired to come to lecture than starting with workers and demographics first because I felt like that topic wasn't as interesting for students at the beginning

**Instructor Comment**

Such a nice guy and great teacher.

I like that he made connections with the other course he was teaching (CIS530).

Gave valuable feedback for project. Responsive and willing to work with students. Really knowledgeable about the field.

ccb is a legend among legends

CCB is very knowledgeable about crowdsourcing and accommodating of students needs.

Good and engaging instructor, cool slides

Term	Fall, 2018 (2018C)	Enrollment	101	School	School of Engineering and Applied Science						
Activity Type	LEC	Eligible	101	Division	-						
Cross Listed Sections	CIS 521401	Responses	99	Department	-						
		Response Rate	98%	Subject	COMPUTER AND INFORMATION SCI						
Average Ratings											
				This Instructor Only						Responses	
				Worst Rating...Best Rating							
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4		
1 Overall quality of the instructor. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.45	2.45	2.45	-	3% 3	18% 17	31% 29	27% 26	21% 20	95	
2 Overall quality of the course. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.54	2.54	2.54	-	3% 3	15% 14	30% 28	29% 27	23% 22	94	
3 Please rate the difficulty of the course. Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult	2.05	2.05	2.05	-	5% 4	15% 11	51% 38	28% 21	1% 1	75	
4 Instructor was appropriately accessible outside of class time. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.69	2.69	2.69	-	3% 2	9% 7	28% 21	35% 26	24% 18	74	
5 Overall quality of the TA(s), if applicable. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.44	2.44	2.44	-	10% 7	13% 9	26% 18	26% 18	26% 18	70	
6 Instructor's ability to communicate the subject matter. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.53	2.53	2.53	-	4% 3	13% 10	29% 22	32% 24	21% 16	75	
7 Instructor's ability to stimulate student interest. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.40	2.40	2.40	-	11% 8	13% 10	21% 16	35% 26	20% 15	75	
8 Value of assigned readings. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.32	2.32	2.32	-	7% 5	10% 7	44% 32	22% 16	17% 12	72	
9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability. Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent	2.73	2.73	2.73	-	5% 4	5% 4	24% 18	41% 31	24% 18	75	
10 Please rate the amount of work required for this course. Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much	2.17	2.17	2.17	-	1% 1	11% 8	61% 46	23% 17	4% 3	75	
11 Would you recommend this course to a major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.79	2.79	2.79	-	4% 3	11% 8	20% 15	33% 25	32% 24	75	
12 Would you recommend this course to a non-major? Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly	2.26	2.26	2.26	-	11% 8	14% 10	23% 17	45% 33	8% 6	74	
24 To your knowledge, has there been cheating in this course? Scale: 0 to 1: Yes, No	0.92	-	-	-	8% 5	92% 61	- -	- -	- -	66	



### Cheating Comment

Looking at other students' code in order to complete homework assignments.

Some students bought "I Voted" stickers off Amazon to use on the second midterm.

No

N/A

Some of the assignments are published on GitHub!

### Comment Suggestion

I appreciate that this course has a lot of information but isn't too difficult. The homework assignments were manageable. If anything, the exams were kind of tricky for an uncurved class but also manageable.

I wish the topics we covered were tied in together more sometimes it just felt like we had forgotten that we were learning artificial intelligence, as we were learning how to implement certain applications

I was surprised how much overlap there was with the machine learning classes and I wish it were more clear that was the case from the beginning. I was taking CIS519 at the same time and the second half of this class covered the same topics, just from a slightly different perspective. The homeworks were much easier than I was expecting from a 500 level course.

Really enjoyed the course. Pacing was good, level was in depth enough that those who have a deep understanding of linear algebra can get into the nitty gritty, but accessible enough that those without lin alg experience won't feel overwhelmed. It is definitely possible to take this class and get very little out of it if you don't go to class and do minimal work on the HW, but I really feel like I got a lot out of this class.

I hope the professor prepares his own material next time because things we learned in the lecture were not sufficient for the tests.

Love it! I want to take more AI I want to dive deeper I want more, so in that sense the course was a major success. The main bumps for me were that a lot of the times, the homeworks were not fully doable unless I went to the TA office hours and learned tips and tricks that weren't specified from the hw descriptions a lot of the tricks almost seemed to come from out of left field and I would never have known to use them if I hadn't gone to office hours, which could have disadvantaged students who didn't go to office hours. Also, the tests didn't seem to reflect the homeworks all that well (which would be fine, if there were enough practice problems to prepare for the midterms properly. But the practice problems were disorganized/it wasn't clear how to study for the exams in order to do well).

Great course

I felt like I gained a lot from this course because the lectures were really solid. The slide decks used were very organized and easy to follow. The assignments were reasonable, although they definitely a good amount of work. The tests were a bit more challenging. The TAs were good in this class and were very accessible. Overall I really enjoyed this class! I would just try to make the tests a bit more similar to lectures in terms of the level of detail (tests required a bit more depth of knowledge).

The entire course was ripped off from the Berkeley AI course. The autograder tests for homework code were designed by sadists.

This has been one of my favorite courses in the CIS department. I think the course is structured very well, and has an appropriate time requirement outside of class. I think most of the content is very useful. One thing I would do is make more brief connections to what is up and coming in the field of AI, since AI is so huge in the tech industry right now.

It does not feel good when you attend a university that purportedly offers a world class education, and the material that is provided in class is ripped off from UC Berkeley. I would hope that the professors would be at least interested enough in the material to write their own slides. Professor Callison Burch seemed to only hastily go over the slides before lecture which means the quality of lecture was mediocre at best as well. The exams seemed to pull more from the textbooks than the lectures anyway, as did the homework assignments rendering the lectures essentially useless and the course essentially a "self teach" course (keep that in consideration next semester if you don't want to have an empty lecture hall anymore).

Course is not that interesting if you've taken 519/520

The TAs did not answer Piazza questions as frequently as they should have. Many posts, some from several weeks or months ago, still remain unanswered. There was a drastic dip in lecture quality in the second half of the course, and the third midterm tested concepts that were either never explained or only glossed over in class. Students did not have a chance to practice the theory tested on the third exam, giving those who previously or concurrently took 519 or 520 a strong, unfair advantage. Finally, the voting extra credit on the second exam was grossly unfair to international and out of state students: many of us are not in contact with other students who can vote in the state of PA, and, as mentioned above, some students cheated by buying "I voted" stickers online.

I really enjoyed the course, especially the homework assignments, through I feel I learned the most. The one criticism I might have is that on a couple of occasions, material covered on homeworks after exams that tested them, and I think I could've learned a bit better had things been flipped

This course was great until we started learning about machine learning. Many key concepts were not taught to us. The lectures made it seem like all machine learning algorithms require is to follow a list of random/unconnected algorithms like Perceptron, Naive Bayes, kNN, Clustering and Neural Nets, which isn't the case at all. Perceptron is derived from applying gradient descent on a specific loss function. But in class, gradient descent was only discussed w.r.t neural networks. I'm not sure why this is so. Naive Bayes' parameters are estimated using Maximum Likelihood Estimation, which requires making assumption about the probability distribution of the data. This was not mentioned at all. Instead, we're given the formula for the Maximum Likelihood Estimation without even mentioning what probability distribution assumption was made about the data. Worse part is that in the exam we were tested on this, and I didn't memorize the MLE formula given that I didn't know what probability distribution assumption was made. As for kNN, Clustering and Neural Nets, numerous questions were asked on Piazza. But TAs and instructors don't answer maybe 40% of Piazza posts. Perhaps the questions that we ask on Piazza are unrelated to the material taught or maybe it goes beyond the class material. Yet, in the exam we're precisely tested on material that weren't even covered in class. There are questions in the exam related to different activation functions in neural networks and kernels that weren't mentioned in class, so it benefits only those who've taken a prior machine learning class. During Midterm 2, CCB gave extra credits to students who voted. This is really unfair to international students. Overall, I think students who've taken machine learning in another class 519/520 will be confused by the way the material was presented and tested. And students who've never taken a machine learning class is not only severely disadvantaged but they will also be incredibly uninspired by machine learning.

This class is a great way to begin AI. The instructor is good, and knows what he is doing. TAs respond timely and thoroughly. However, some TAs might need to improve their skills at answering people's questions.

CIS 521 is a nice course, because it has a hands on approach to AI. The curriculum needs to be improved, because some topics are repeated with ML classes (CIS 520) and there is no extra material. Some of the topics were covered without assignments (Bayes nets). I think that reviewing the curriculum of CIS 519 and CIS 520 may be useful to avoid repetition. The class had the best TA staff I have seen so far. Prof. CCB said that the course was not going to be curved ("beyond 90% will get an A"), and it seems that it was.

Overall good course. I wish there was a project track where the students would get to build some sort of artificially intelligent agent using a combination of the techniques taught in class. @ exams and a project would be ideal.

#### Instructor Comment

A very kind and understanding professor. It seemed that he wanted his students to do well. Created a positive learning environment.

More example problems during lecture would be helpful.

He doesn't engage students' interests well, and you can see for yourself how many people really show up to class and pay attention (just maybe 2 or 3 people). I come to class every lecture but cannot ever concentrate on what he's saying because he just doesn't hold anyone's interests. Contrast this to Mitch Marcus' guest lecture with us. He was so engaging and such a dynamic lecturer! what's missing from CCB's lectures is the motivation. He just comes in, tries to half heartedly teach something and then leaves. He doesn't give us the full story and motivation for what we're getting taught. it's also obvious he doesn't care about the class since he comes in and is obviously very bored when he teaches. Mitch marcus was so excited the whole time! Also CCB often gets confused and gets material wrong.

CCB did a really admirable job teaching difficult material in a way that was easy to understand. The class was paced well, and CCB was available outside class if help was needed. Occasionally there was the awkward silence waiting for students to answer a question, but the class was fairly smooth.

Materials were all copied from other schools (UC Berkeley, Stanford). Even the finals was a copied test from Berkeley.

He's kind of a boring lecturer. I had him both for 121 and now 521 and what struck me was that in 121 I assumed he sounded boring because he was bored by teaching pretty basic stuff. But even when he's clearly super excited about a topic (like in 521) it was hard to focus 100% in lectures. So I think he held class interest more because of the engaging content \*despite\* his lecture skills, in no way \*because\* of his lecture skills. That being said, it's clear he's super passionate about this stuff and that's very important in a prof. It was awesome that he was able to bring in his own experience to the field (esp towards the end of the semester).

great guy, very nice and patient, very much like his style of homework

Professor Callison Burch really explains topics in detail and steps through new material in a way that makes it really easy to understand. I was covering the same topics in other classes and was not understand them and once Professor Callison Burch went over them it started to make much more sense. He was very accessible outside of class and more than happy to chat with students after lecture. I really enjoyed taking this course with him.

Fine instructor, pushed his politics unto students including via videos and extra credit.

Prof. Callison Burch is great. His expectations align well with student expectations. He explains concepts well.

It does not feel good when you attend a university that purportedly offers a world class education, and the material that is provided in class is ripped off from UC Berkeley. I would hope that the professors would be at least interested enough in the material to write their own slides. Professor Callison Burch seemed to only hastily go over the slides before lecture which means the quality of lecture was mediocre at best as well. The exams seemed to pull more from the textbooks than the lectures anyway, as did the homework assignments rendering the lectures essentially useless and the course essentially a "self teach" course (keep that in consideration next semester if you don't want to have an empty lecture hall anymore).

While CCB was an engaging instructor, it made me really frustrated and disappointed to see the amount that the TA's did not respond to questions on piazza or assist students in general. I wish that the professor had instructed them to do their jobs.

So dope, I loved this class and I love CCB. He's a supportive guy, he's smart, and he's interesting. His ability to break down the material into easily digestible, core concepts is incredible. He's one of the best teachers I've ever had for anything, and I want him to know that. I have no negative feedback. Chris Koch

The Instructor can give great intuition of AI concepts to students, but sometimes I feel the lecture is not well prepared and it got interrupted because the instructor needed time to regroup on how to explain the material or how to give an example.

The first half of the course was taught much better than the second half. Specifically, the machine learning portions were rushed and poorly explained.

Professor Callison Burch was great

The most intellectually stimulating Professor I've had at Penn.

CCB has re used a lot of lectures from Mitch's course last year. The only difference is that when he's not using Mitch's lectures, he's using Berkeley's lectures. It seemed as though CCB just gave up trying to teach well in the last 1/3rd of the class.

he's a great professor, very nice and friendly and knows very well about the subject.

Prof. Callison Burch is not only an excellent professor, but also an awesome person. I wish all the professors at Penn had his human qualities and empathy.

Excellent, but the lectures were slightly slow. The instructor was clear and made the lectures interesting

Term	Spring, 2018 (2018A)	Enrollment	64	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	64	Division	-
Cross Listed Sections	-	Responses	62	Department	-
		Response Rate	97%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.74	2.74	2.74	-	5% 3	2% 1	35% 22	31% 19	27% 17	62
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.79	2.79	2.79	-	3% 2	3% 2	33% 20	33% 20	28% 17	61
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.34	2.34	2.34	-	4% 2	14% 8	36% 20	38% 21	9% 5	56
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.71	2.71	2.71	-	2% 1	14% 8	23% 13	32% 18	29% 16	56
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.93	2.93	2.93	-	0% 0	5% 3	25% 14	41% 23	29% 16	56
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.75	2.75	2.75	-	2% 1	7% 4	27% 15	43% 24	21% 12	56
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.64	2.64	2.64	-	2% 1	14% 8	27% 15	32% 18	25% 14	56
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.00	-	2% 1	4% 2	28% 15	26% 14	41% 22	54
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.96	2.96	2.96	-	4% 2	9% 5	20% 11	22% 12	45% 25	55
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.48	2.48	2.48	-	0% 0	9% 5	43% 23	39% 21	9% 5	54
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.95	2.95	2.95	-	4% 2	0% 0	31% 17	29% 16	36% 20	55
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.06	2.06	2.06	-	15% 8	15% 8	37% 20	17% 9	17% 9	54
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 48	- -	- -	- -	48

**Comment Suggestion**

Awesome and well executed course. I hope you continue to teach it!!

This course definitely succeeded in making machine learning much more approachable. There is a lot of opportunities to build models, be creative with developing features, etc. It felt at times that we rushed through large swaths of material without getting into too much depth.

Homeworks are not graded timely -- 2 days to the end of the semester, half of the homeworks/ quizzes are not graded.

I loved this class! Overall, the assignments struck the right balance between being difficult enough that I learned concepts without being overwhelmed. It was sometimes frustrating that the lectures were done by grad students instead of the professor, as they were not good lecturers.

The course was very successful in showing what Computational Linguistics is about. I'm very glad I took it! Now I'm much more comfortable when I read about NLP research.

Great course content, poorly organized at times. Homeworks need to be more carefully prepped before they're released, and when problems do arise (and are posted to Piazza) they really need to be resolved more quickly!

Really enjoyed class.

I liked the course.

I wish there was more lecturing on the part of the professor, however, the class itself was excellent.

I enjoyed the course and found the material pretty interesting for the most part. That said, it did feel a bit disorganized at times. I also didn't really love the in-class workshops, as we weren't usually told what we would be doing in class until then and they weren't at all productive for the most part. We also had too many guest lectures--would have been nice to have the professor lecture more often.

More TA office hours would be very helpful

Class schedule and grading are very confusing. Extremely poor organization.

Good course

Homework assignment details were often ambiguous. Improvement of assignment wording and earlier/better autograding and Gradescope setup would improve course quality. 50% of homeworks are still ungraded during the last week of class.

The course could have been better had the TAs been more approachable, and if the instructor showed more enthusiasm to give a theoretical aspect of the course.

On a scale of 0-10, a 7.5

**Instructor Comment**

Having the deadlines for homework the day before a quiz is not helpful. Additionally, I'd rather have the lecture material actually cover what's being tested, and by that I know that this is already technically true, but lecture did not go as deep as the textbook did. This is troubling because some papers were incredibly dense.

CCB brings a lot of great enthusiasm to the course. It's refreshing to have a professor that cares about the societal impact of his work.

GOOD

CCB is the perfect prof for this course. I think there were some logistical faults in its organization and execution this semester that left me less than excited about it, but I think that falls more under course comments than CCB comments.

Really interesting course material!

Professor Callison-Burch is one of the nicest persons I've met. He was always happy to offer guidance and help.

Passionate about the topic. Loved the class.

Very friendly, helpful, and sensitive to student mental health -- something that seems to be lacking among a lot of Penn professors; I enjoyed having him as a professor.

Helpful

The instructor did not seem interested in teaching the course. He gave very few lectures in the class.

Prof. Callison-Burch is extremely knowledgeable and very humble. Also, he takes interest in reaching out to the students to check how they were performing and if they are having any troubles understanding the topics. It would be great if the course had better homeworks, may be fewer of them though. Further, the class could have been more structured, in respect to the homeworks and quizzes. Also the grading could have been faster and in time. However, not complaining because this is the first time he's taking this class (after Prof. And Nenkova) and there were more good things about the class than these smaller issues. Recommended.

Term	Fall, 2017 (2017C)	Enrollment	216	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	215	Division	-
Cross Listed Sections	-	Responses	200	Department	-
		Response Rate	93%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	1.67	1.67	2.74	-	23% 43	23% 44	29% 54	15% 29	10% 19	189
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.07	2.07	2.70	-	11% 21	21% 39	32% 60	22% 41	14% 27	188
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	3.28	3.28	2.70	-	0% 0	3% 5	11% 17	39% 59	46% 69	150
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.10	2.10	2.74	-	8% 12	15% 22	43% 61	24% 35	9% 13	143
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.39	2.39	2.77	-	7% 10	12% 18	34% 51	28% 42	18% 27	148
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	1.69	1.69	2.67	-	19% 28	27% 41	27% 41	19% 29	7% 11	150
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	1.41	1.41	2.48	-	31% 46	24% 36	25% 38	13% 20	7% 10	150
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.05	2.05	2.32	-	10% 15	21% 30	32% 47	27% 39	10% 14	145
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.90	2.90	2.81	-	3% 4	7% 10	22% 32	36% 53	33% 49	148
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.48	3.48	2.64	-	0% 0	0% 0	8% 12	36% 54	56% 84	150
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.28	3.28	3.13	-	5% 8	1% 1	9% 13	31% 46	54% 80	148
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	1.58	1.58	1.72	-	27% 40	20% 30	29% 43	16% 24	8% 12	149
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.89	-	-	-	11% 15	89% 126	- -	- -	- -	141



**Cheating Comment**

Students looking at each other's code

The homeworks were the same as coursera and I felt that this was unfair because people who try to be honest and do it by themselves struggle while those who look at the coursera homework for "guidance" have much easier. Next time maybe don't have the same exact homeworks as coursera to prevent this

Students have showed each other their code and solutions

Yes. People were searching for answers online and were comparing code. This was my impression from seeing/hearing this occur in class, recitation, and office hours.

N/A

Extensive cheating on programming/written assignments.

The usual bending rules of what it means to "collaborate". Nothing serious.

Homework

People clicking in for each other and collaborating on individual assignments

Homework assignments were simply taken from Princeton's course/Coursera. Thus, students were able to get solutions to many assignments from GitHub etc.

Students helping each other on the homework

Rampant because he uses HWs that are online or taken from Princeton's courses.

**Comment Suggestion**

There was very little communication between the professor and the TAs of this course. Often times the TAs were unsure of what material the professor had covered up until the current recitation. The material was very valuable and I feel that I learned a lot.

This course certainly taught me a lot but the way it was taught this year makes me realize I've missed out on some very core comp sci knowledge, or at least received it half-baked.

Great course. I learned a lot. The Coursera courses from Princeton, Algorithms I and II, that this course is based off of are also really good.

Overall had a great experience. I wish we received different hw grades back sooner because it was hard to improve on future homeworks without timely feedback. Also think attendance should be optional given that students can watch the videos on Coursera

This was the first CIS course where I really felt like I understood what was happening! The lectures were clear and the homeworks felt like they were at an appropriate level, in general. I did have some frustrations with this class: 1) The cheating, mentioned above. I think part of the reason this course was difficult for me was because so many other students seem to be cheating, so my friends and I that weren't were competing against an unfairly advantaged subset of students. This was really frustrating. 2) The fact that the homework was frequently updated after it was released. I think in the future there should be a certain standard in terms of when the homework can't be changed anymore. It was incredibly frustrating to be working on the homework in a specific manner only to later see that the assignment had changed. I felt like this reflected an unhealthy attitude about how dedicated students should be about the class. I certainly enjoyed the class and worked hard on it, but it was frustrating to work ahead on a homework so that I could prioritize other aspects of my life later in the week, only to find out that I needed to rewrite parts of the homework. I think for the TAs/instructors these changes may not seem so significant, but the homeworks take me a long time and I really struggle with them, and the changes would take me a lot of time to implement. 3) How homework changes are communicated - sometimes this would occur across a bunch of piazza posts, making me feel like I had to read a lot of piazza posts only to try and understand the (conflicting) messages about the homework. 4) Inconsistencies among TAs. On piazza and in office hours, TAs often gave contradictory instructions and sometimes it seemed like the TAs were unclear about the homework. 5) Announcements being posted on piazza. Often, TAs would post announcements on piazza about things that were really useful/important, such as the code coverage tools in eclipse. However, I don't think this is the most useful mechanism of sharing information, as evidenced by the fact that the number of views on some of these posts was much less than the number of students in the class. My friend didn't learn about the code coverage tools until I mentioned them to her in late November, and I didn't learn about them until after the second homework. I would prefer if big announcements were given in class or shared in an email. 6) Overly difficult written homework problems. There were a few written homework problems that seemed unfairly difficult. I had instances where the TAs said they weren't sure if the problem had a solution. This was incredibly frustrating. The TAs should know if a problem has a solution! Things I liked: The generous late day policy. This relieved a lot of stress for me and made me feel more in control and less stressed during the semester. It definitely helped my mental health.

While I enjoyed the course and learned a lot, I think it could be reformed in certain ways. Particularly, means of communication between instructors and students could be better. Important messages are often posted on piazza and students don't get notified about them (i.e. emails to the class where students would get notifications would be better). Also, the expectation for students who have nearly finished their assignments to change their work based on last-minute corrections to the instructions is unfair. Finally, I did not think the TAs for this course were particularly strong in that they didn't always seem to have a very strong handle on the material and sometimes couldn't answer questions because they didn't know how to do the problems in the first place. I think that because the course asks so much of its students in terms of time commitment/work load/self-teaching, there should be stronger organization on piazza and among TAs. Overall though, I liked the course a lot and think that the professor is a great instructor!

Very poorly run in general. Homework assignments were often released late, giving students less than a week to complete them. Further, many assignments were changed after being released, often forcing students to waste time redoing them. There are assignments that were submitted over a month ago that have still not been graded, making it exceptionally difficult to know how I am performing in the class. In short, this has been the worst class I have taken at Penn.

Homework assignments should not take more than a month to grade, and having ~20% of your grade in limbo until 3 days before the final should also not be acceptable.

So hard

The course is well organized, covering important materials with appropriate pace. Although some subjects are difficult to grasp at first, the professor and TAs are readily available so putting some time and effort pays off.

Useful class, just wish it was better taught.

The course was useful. The instructor was lacking. Office hours were overly crowded.

Extremely helpful class in regards to computer science.

CCB is one of the worst instructors I've ever had. He's laughably bad. The TAs were actually pretty good though.

CCB should not teach CIS 121 again - this is a very important foundational class and requisites a professor that wants to teach the class. This class cannot continue getting watered down!

There is absolutely no way we learned everything we should have from this course. There is so much that was just skipped. I do not feel prepared for future classes, much less the workplace.

This course is definitely a useful course - as I've started applying to jobs, I see these problems come up again and again. It was pretty disorganized this semester, with vast amounts of miscommunication between TAs and the professor and instructors and students. Also, it was frustrating to learn about 2/3 through the semester that about 80% of the homework problems could be found verbatim online. I wish there were more theory questions as well, since the homeworks were mainly code based which led to the exams, which were mainly theory based, feeling like they came a little out of left field.

I'm one of the lucky few that actually feel confident in this material. This is because of the excellent TA staff and their willingness to teach me what I'm not learning in class, however, not because of the course itself. The material has been watered down to a point where I would not be even close to prepared for future courses or job interviews, etc. if I hadn't taken the initiative to teach myself all that I should have learned.

Great class, really enjoyed it and hope I can take similar classes in the future

Extremely important and foundational course that has an instructor that doesn't care in the fall and is ridiculously challenging in the spring. Please fix this CIS department.

There was not an appropriate balance between practice and theory. While the programming assignments could be difficult, the theory behind the methodology we learned was not explained in depth. Thus, many students used alternate course materials, read the assigned book (and the CLRS textbook) outside of class

While I thoroughly enjoyed the content of this course, I really feel like my prospective grade is not representative of how much I learned. An enormous part of this is in the grading of the coding homework assignments; I always felt that I thoroughly understood the content and always submitted code with complete functionality with all of my tests passing according to how I interpreted the assignments, but all code is merely run through an autograder, and oftentimes there are many hidden edge cases that fail with little explanation. This was an issue throughout the entire semester, and consequently it was very exhausting and unrewarding to continuously receive much lower grades than expected on my assignments. Regardless, I still enjoyed how the course was taught and the content we learned.

The lecture of this class was completely useless. Got through this class by reading lecture slides, and was pretty annoyed that attendance was mandatory because I didn't gain anything at all from the lecture. TAs are hit or miss, but recitation was generally helpful. Grading was very slow compared to most CIS classes, and very arbitrary. Submitted regrade requests and got points back on half the assignments, which was frustrating because of the frequency of TAs messing up. Recitation was sometimes helpful, sometimes not. Became a better programmer from this class, but only because of the lecture notes and the assignments.

Minor not major

Good class

I thought the course was very helpful, though students in previous runs of the class have said that the content we were learning was a joke compared to the content of previous runs of the class (and runs with Rajiv). I don't like the idea that I fucked up by taking it when I did. That said, the class was quite good and I learned a bunch.

Bad. See "Overall instructor comments" above.

NA

This course felt like a waste of time. I entered this course with some intuitive understanding of algorithms and data structure, and was looking simply to formalize my understanding and practice my skills. The material provided was not rigorous and explanations were frequently hand-waved instead of explored in detail. The professor and TAs were helpful when explaining concepts but become obstructive and unhelpful when looking for clarification or deeper knowledge. The assignments were often busywork programming tasks with little relationship to the actual material (as presented on the exams). The exams, in turn, tested deep conceptual material that was barely presented, if at all, during lecture and recitation. In addition, the grading seemed arbitrary, where on one question, a mostly correct answer with a small mistake would earn most of the credit, while another question, a similarly correct answer would simply receive a 0. I do not believe this course has benefited me or prepared me for higher-level courses.

Easier than previous years

The in-depth examples of algorithms got very boring at times. I'm not sure that it is usefully for most people to go through 10 minutes long examples of basic code.

Assignments were disorganized, coordination between TAs and professor was poor, exam difficulty was inconsistent, and details of content and instructions sometimes differed among lectures, recitations, and the textbook.

This course material is great. I really enjoyed learning about it as it is fundamental to understanding how to write quality programs. A point of irritation is that everything is stolen from the Princeton version of the course. This is mostly fine, but it feels inauthentic and not necessarily correlated with the teaching at times.

Great course for future courses in computer science. I like the foundation in data structures and algorithms, as I certainly feel much more comfortable with them both in an academic setting and a technical interview setting. I thought the course content didn't need to be expanded or shortened, and was satisfied with the pace. As with all CS courses, the homework took an inordinate amount of time to complete and finishing on time absolutely required you to start early. I thought the split of written vs programming work was well distributed. Overall, I think this level of difficulty was appropriate for me to get what I wanted out of the course, and I certainly appreciate this workload more than the other section's workload.

The homework assignments took a huge amount of time for just one class

The TAs were absolutely wonderful. This course is arguably the most important one for those trying to go into the tech industry, as it has ~80-90% of concepts one needs to know for technical interviews. However, the fact that it isn't taught nearly as well as the other CIS courses simply baffles me. CIS 160 is a great example of a well-structured, well-taught course if CIS 121 were just as organized, maybe we'd send more students to Google and the like.

It would help if more algorithm problems is covered in homework and change the programming assignment to challenge students more in the area of coming up with difficult algorithm.

You know the class is bad when you have students listening to the recorded Coursera version from Princeton with headphones in CCB's OWN CLASS! Absolutely a waste of time. Without doubt, CIS121 is a really bad copy of Princeton's COS226. Specifically, it can be shown that the quality of CIS121 is polynomially smaller than COS226. This experience is yet another reminder that Penn is not a top-tier Ivy

Great course, well paced.

This has honestly been the most useful course I have taken so far. I learned a bunch of knowledge about computer programming and how to apply that knowledge.. One thing I did not like though is that the programming and written portions of the homeworks were both due on the same day. I feel that in rush of trying to finish the programming portion, I didn't really have enough time to work on the written homework. And as a result, I often was not able to understand the material of the written homework as much as I could have and wanted to. However, I think that having programming homework due on Wednesday and written homework due on Thursday would solve this issue.

TAs amazing.

I have never had a course make me hate myself and this school more than this course

**Instructor Comment**

Interesting and important topics but the professor did not communicate the material well. The lectures could have been better as well as the organization of the course. The homeworks and TAs seemed very disorganized.

This was my favorite course so far, but I had to most of my learnings outside of class if not all.

CCB was an extremely dry lecturer. He did not inspire interest in the subject matter. He was also a very lazy professor as our assignments were taken from a free online Coursera class. He did not plan assignments well either. After several days had passed of a one week period given to complete an assignment, he changed the requirements which was extremely stressful and inconvenient for students who had already completed the assignment given the original specifications. His assignment descriptions were also vague and incomplete. On piazza he would post limitations and clarifications about the homework that were never communicated directly to the whole class. That said, he was a very understanding professor in office hours. Very accommodating with any extenuating circumstances students may have experienced.

CCB isn't the best at structuring a coherent and organized class that is fundamental computer science, but he is certainly not outright terrible, and obviously knows his stuff.

I really felt the professor was available outside of class but the problem I think was that the professor did not explain the way material specifically homework would be weighted in between the written and final. For example, at the beginning of the semester I thought that the written homework were worth a total number of appointments that was stated on gradescope so I would think that it was worth 5 points which was not clearly expressed.

The professor is very nice and I think he cares about the students. However, I feel that he could have simply played the Coursera videos during lecture. If we simply watched the Coursera course, we would have understood the material better and would have relieved the professor from having to recite the Coursera videos verbatim.

I appreciate how CCB made an effort to help students with allowing us to drop a hw

Great lectures and extremely helpful

Professor Callison-Burch is engaging and approachable, and clearly has a passion for the subject matter.

Dr. Callison-Burch is exceptionally disorganized. He failed to communicate any of the concepts effectively and often seemed unprepared for lecture. Further, he seemed like he did not enjoy teaching this class.

It was hard to listen and understand, sometimes I felt that mumbled through topics

Uninteresting lecturer, generally unprepared with slides.

Decent

he's a nice guy but like the class is kinda not sufficient for learning everything i should know

CCB was an alright professor, at times he didn't seem passionate about teaching the course. He struggled to communicate in an engaging manner, which made the lectures boring and hard to pay attention to. By the end, the only reason I'd go to class was to click in - I knew I could learn the material quicker and more in-depth from the slides online.

I have never seen a professor care less about a class than Dr. Callison-Burch and 121. He did the minimum amount of work possible: reading robotically from slides made from Princeton professors during lecture, taking full homeworks and tests from Princeton professors, and not communicating with the TAs at all. I was extremely excited for this course, however Dr. Callison-Burch completely and utterly ruined that.

The instructor was just, quite simply, not invigorating. He was dry and somewhat repetitive.

Has very structured slides and is very helpful during office hours.

Unbelievably awful. I've never had a teacher who seemed to care less about instructing. He would give kids badwrong advice for n the homework because he didn't understand his own assignments.

All of his lecture slides and material are copied off of Princeton's course! He just read off the lectures in class, didn't do any supplementary examples on the board. Anyone can read the slides that someone else wrote!! It's even more ironic because he would always emphasize not copying other people's work (LOL). In my opinion, the amazing TA's are what made this course great. The passion that they had for the subject material and their willingness to help. I loved the material of this course and I looked forward to doing the homeworks even though they would take lots of time.

He does not care about the course or the students, and does not even attempt to hide it. He changed the instructions on homework the day before they were due, and the changes often took 5 - 7 + hours to implement which is ridiculous to do the day before its due. This happened more than once.

It's clear he knows his stuff and all, but CCB definitely didn't do a good job "stimulating student interest". Lectures were pretty uninteresting, even though the material itself is so cool!

Sometimes a little difficult to understand the material fully due to the amount of topics that we have to go over in every lecture.

He was not a very good teacher

When the instructor says on the first day "I just got tenure because my research is sick, not because of my teaching skills. You should follow the coursera from the text book authors." You know you're going to be in for a rough time.

The professor, while kind and helpful to students (he has 3 office hours every week), is not very skilled at explaining concepts. Sitting in class at times, it felt as if (and at least some of the other students agreed) I would have better utilized my time by reading the assigned book. In fact, it was only by using alternate course materials that I finally understood the difference between lower bounds & upper bounds and worst case & best case analysis, which was an important point of knowledge in the course.

Fair instructor

Dr. Callison-Burch always presented material in a clear and enthusiastic manner and made significant efforts to make the class as manageable as possible.

Good

CCB is a really good instructor. I like his teaching style.

I hate to do this, but I have nothing good to say about Professor Callison-Burch. He essentially had us all pay thousands of dollars for a course that we can find on Coursera - and managed to teach it even less effectively. His demeanor in class made it obvious he was uninterested in teaching this course. Homework assignments were not relevant to course material / what we learned in class, making it hard for the TAs to help us and even harder for us to complete. They took up so much time, and didn't result in any knowledge gain. Much of the homework was auto-graded with minimal elaboration on why points were removed, so it was incredibly difficult to improve for following assignments. On top of that, CCB's assignments were often riddled with mistakes upon release, so he constantly changed due dates and disrupted schedules to correct things. All in all, I was very disappointed, and I feel this set all of us back as CIS majors, since this was a fundamental requirement.

NA

Lectures mostly consisted of reading from the slides. Professor was knowledgeable in the material and provided helpful insights when prompted, but was not engaged.

Alright

Was not the best instructor.

Familiar with course material. Seemed disinterested in teaching it, however. Always available for weekly office hours, which were helpful.



He makes an effort to make the course manageable which is great. However, he did not appropriately manage the TA staff. So there were always many unanswered questions, changes, and contradictions to the homework. This was definitely a source of frustration. However, he taught decently well and I enjoyed the class.

Not good at all

Professor Callison-Burch was a satisfactory instructor, conveying course material relatively clearly. His lectures tended to be on the dry side, mostly due to the sound of his voice, which tended to be monotonous and a bit mumbled. This made it somewhat difficult to pay close attention in lecture, especially in the back. One suggestion I would make to Professor Callison-Burch is to try to sound more engaging when delivering his lectures, injecting more enthusiasm into his voice and by trying to be a bit more humorous. The few jokes he did make in the semester certainly brought on a positive audience response, so I think he could take that further to help bring students back in. Outside of class time, Professor Callison-Burch was very helpful in office hours, often managing groups of students and taking care to give attention to everybody's questions. It is clear that the professor cares a lot about his students, which I certainly appreciated. I think my overall opinion is that he did a good job, but there's room for improvement in his lecturing ability.

He was bad

He shouldn't be teaching. The man has tenure and he knows it. He redirected us to a Coursera page to learn there instead. He reads off of slides and does nothing more. The TA team gets frustrated because he is so disorganized.

Professor Callison-Burch did not effectively teach the course material. I found his teaching style far too passive; he often just went through the lecture slides instead of using the blackboard or going through complicated examples. It often felt like he taught the bare minimum; much of what I really learned came from TAs, the textbook, or other online resources. The curriculum progression made little sense. We did a homework assignment on material covered on the midterm after that midterm.

The instructor was not clear in communicating the homework changes with the students and the TAs, and the material we learned was very different from what we were expected to learn. There is a huge disparity from our section to the other sections from previous semesters, and our grading for homeworks are also very behind.

Really bad. Nothing left to say. Clearly does not care about the class- ask anyone TAs included (maybe even he will confess)

Overall I did not have a good experience with this semester of CIS-121. Professor Callison-Burch lacked in ability to stimulate student interest in the content. He really seemed like he had no concern for his students or their performance in the class. He seemed to teach always the bare minimum by just trying to get through the lecture slides. In the first few months of the course, his lectures were always a week behind whatever the TA's were teaching in recitation. This lack of coordination between the TA's and professor is a prime example of the disorganization of this course. One of the programming assignments, Scheduler, was a new assignment this semester. There were several issues related to logistics and specifics of the assignment that were hashed out while students were completing the assignment themselves. The professor made clarifications very late after the assignment was released and students had to accommodate for all these changes and rewrite their assignment several times. This hit students who were responsible and finished the assignment according to previous guidelines early on especially hard, since they had to make the most changes. All in all, I don't feel I had a very good experience with this class. I believe the content has the potential to be incredibly interesting and that I could have learned a lot, but the total lack of enthusiasm from Professor Callison-Burch sort of killed it for me. I have heard from my friends that he is really understanding with regards to extenuating circumstances and granting extensions though. I'm sure the professor is a great person, but he has not been a great professor this past semester.

Lectures make me sleepy.

Not bad at explaining concepts but often reads straight from the lecture slides for the entire lecture.

Seems like a great guy. Nice about deadlines, and a good lecturer

I love CCB but I don't know how I feel about his teaching.



Good at explaining difficult concepts. I like that he sometimes goes a little slow, or redoubles to make sure we follow; there's often a lot going on in the slides and he breaks it down effectively.

Lectures tended to be boring

Prof Callison-Burch was very accessible and helpful, however in my opinion he failed to stimulate student interest. The lectures were taken from an online course offered by another university and the solutions to the homeworks were online. Most of the people taking the class were looking at the online solutions and not actually doing it on their own, which caused them to get better grades. This was unfair for the students who actually made an effort to do it on their own.

Term	Spring, 2017 (2017A)	Enrollment	13	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	13	Division	-
Cross Listed Sections	-	Responses	8	Department	-
		Response Rate	62%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.83	2.83	3.28	-	0% 0	0% 0	33% 2	50% 3	17% 1	6
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.86	2.86	3.27	-	0% 0	14% 1	14% 1	43% 3	29% 2	7
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.67	2.67	2.67	-	0% 0	0% 0	50% 3	33% 2	17% 1	6
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.80	2.80	3.09	-	0% 0	0% 0	40% 2	40% 2	20% 1	5
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	4.00	4.00	3.22	-	0% 0	0% 0	0% 0	0% 0	100% 4	4
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.19	-	0% 0	0% 0	20% 1	60% 3	20% 1	5
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.20	3.10	3.18	-	0% 0	0% 0	20% 1	40% 2	40% 2	5
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.15	-	0% 0	17% 1	17% 1	17% 1	50% 3	6
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.67	3.67	3.39	-	0% 0	0% 0	17% 1	0% 0	83% 5	6
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.33	3.33	2.92	-	0% 0	0% 0	17% 1	33% 2	50% 3	6
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.83	2.83	3.19	-	17% 1	0% 0	17% 1	17% 1	50% 3	6
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.33	2.33	2.21	-	0% 0	33% 2	33% 2	0% 0	33% 2	6
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 3	- -	- -	- -	3

**Comment Suggestion**

It would have been great if there were a tensorflow tutorial and went through the seq2seq related codes.

Term	Fall, 2016 (2016C)	Enrollment	219	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	218	Division	-
Cross Listed Sections	-	Responses	203	Department	-
		Response Rate	93%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.19	2.19	2.94	-	9% 16	17% 32	35% 65	25% 46	15% 27	186
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.49	2.49	2.72	-	5% 10	10% 19	34% 64	30% 55	20% 38	186
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	3.68	3.68	3.03	-	0% 0	0% 0	2% 3	27% 38	71% 98	139
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.48	2.48	2.94	-	4% 5	11% 15	39% 54	26% 35	20% 28	137
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.35	2.35	2.82	-	5% 7	18% 25	32% 45	26% 36	19% 26	139
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.26	2.26	2.89	-	7% 10	19% 26	31% 43	29% 40	15% 21	140
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	1.96	1.96	2.58	-	13% 18	22% 31	34% 47	19% 27	12% 17	140
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.05	2.05	2.37	-	7% 9	26% 36	34% 46	23% 31	11% 15	137
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.37	3.37	3.17	-	1% 2	1% 2	12% 17	29% 40	56% 79	140
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.84	3.84	3.31	-	0% 0	0% 0	1% 1	14% 20	85% 120	141
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.45	3.45	3.37	-	2% 3	1% 2	6% 8	31% 44	60% 84	141
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	1.54	1.54	1.70	-	31% 44	16% 23	28% 39	17% 24	8% 11	141
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.94	-	-	-	6% 7	94% 114	- -	- -	- -	121

**Cheating Comment**

Typical CIS course issues, students looking at other students code

TA's have been helping students who they prefer/giving answers to their friends.

People copy other people's code

Students copy each other's programs and written homework fairly regularly. Cheat checker way need to be more thorough and foolproof.

**Comment Suggestion**

As someone dealing with mental health issues, the structure of this course was incredibly unaccommodating. The logistics of this class truly seemed a bit non-nonsensical.

This course has by far been the most work for a class than I have ever encountered. I did more work for this one class than most people I know in their entire semester. The assignments are unrelenting and very difficult. DO NOT take this class unless you are dedicated to computer science. That being said, each homework was substantive and taught a new concept. I never felt like I was wasting time with an assignment, as each teaches a different concept. A break would have been nice though, especially considering the 4 assignments due in the last 10 days of class.

incredibly stressful class that is not realistic of the real world computer science. Why would there be two assignments due in the same week, let alone same day? There is an unrealistic expectation that students are able to commit 25-50 hours a week to this singular class.

A lot of work, but I learned a lot about how to optimize the runtime and memory efficiency of a computer program. I feel that the knowledge I gained in this course will be very useful for the future if I decide to go into software development.

My main issue with the course was that the lecture topics were sometimes out of sync with the written homework assignments. So you would have to answer problems about topics that weren't taught in class until very close to the assignment's due date.

I am not struggling to pass this course. I am not worried about doing well in this course, and in fact expect to do very well. That being said, I hate this class. I have TAed other intro to CS classes for several semesters, and did very well in CIS 110 and 120, and I think this class is entirely too hard. There is a clear lack of communication between the TAs, the professor, and the students, which makes the course even harder, because we are constantly expected to do homework on material we haven't learned in either recitation or lecture. I am not paying \$60,000 per year for an old textbook. I am paying to be taught, and it is the course staff's responsibility to teach me the material. The amount of work expected for this class is blatantly unreasonable, and having multiple assignments that consistently take 15-20 hours to do both due in one week is poor planning on the administrative end and unfair to students. The homework assignments take 15-20 hours every week, minimum, for every student I have talked to. This is not ok. If every class I took gave me that much homework per week, I would not have time to sleep at all during the week. Having assignments that long are extremely frustrating and discouraging to do. Classes like this are the reason mental health at Penn is one of the worst in the country. The fact that multiple assignments had to be corrected or rereleased after their original release is unfair to students that started early. Lastly, if we are expected to do these unreasonably long and emotionally taxing assignment every week, I expect the TAs to grade them in the same timespan. It is unfair that I have to do so much every week for this class when the TAs consistently drop the ball with releasing homework grades on time. I honestly believe this class has a ton of potential, and that I could have learned the material without the unreasonable, unfair workload and poor instruction. If the course was planned better and the assignments were modified (or if there were less for the semester so that people could do them over more time), I believe this could be an incredible class. That being said, this semester it was the exact opposite. This class has consistently made me incredibly angry and stressed throughout the semester, and I have never been so ready and excited to be rid of the class.

This class is an extremely time-consuming and difficult course. That said, if you spend enough time with the material and go to office hours you should be able to pass. The homework assignments are very frequent and very time consuming -- but almost always worthwhile doing. One exception was the final Wikipedia project; the final project was poorly organized, very time consuming and ultimately did not better anyone's understanding of the material. If you're going to give such an open-ended and enormous assignment, please be more specific about how testing, grading and evaluation will be done.

This was one of the hardest classes I've ever taken. The homework assignments alternated between programming homeworks and written theory-based homeworks, however, it often seemed like the material we were learning in lecture only applied to the written homeworks and did not really help with the programming homeworks. It would have helped a lot if the TAs had used the recitations to go over the previous week's homework assignment, especially for the programming homeworks, instead of reviewing the general concepts from class.

Fun course that covers a lot of interesting topics. Good mix of theory and coding (would like a bit more theory though). TA staff pretty helpful and responsive; generally a good course, though at times the workload can be a tad overwhelming.

Interesting, useful class. Good for interview questions

This course was soo hard, I sacrificed other hw and study time for other classes just to do what I can in this class. Its not fair to other professors and classes.

CCB was great. I really enjoyed the class. Lectures moved a little slow for me, and sometimes I felt as though I did not need to go to learn. Probably because the slides were so informative.

Good curriculum, core concepts strongly reinforced.

One thing that really frustrated me and others through the course was 1) the vague wording in homeworks which needed multiple clarifications on piazza 1a) the many times where piazza comments contradicted themselves and required further clarifications 2) the fact that how Extra Credit would be weighed in the course was revealed through a piazza follow up 10 days before the final 3) the often inability of the TAs to explain the material well, or often times them not even knowing what the answer would be 4) The lack of focus on the theory. I was expecting this to be a course that split programming and theory, but it seemed to be 75% programming 25% theory Overall, I learned a lot from the course but that was solely due to me putting an absolute ton of effort and time into it, and nothing else. The TA's often did not help that much, coupled with the vague wording and inconsistencies on homeworks and piazza posts, made this course much worse than it already was. Really disappointed with this.

I really enjoyed this course. It was hard, but the material was interesting and will definitely be useful in the future. However, I think it could be structured better. I spent upwards of 20 hours a week on work for this class which is really hard to balance when you're in four other classes as well. I think the homeworks are designed by TAs who did really well in the class, and they might be a little disconnected from the fact that they're really hard assignments for a good portion of the students in the class.

This course started off a little disorganized, with files and other things being released prematurely. There is a lot of work in the class. This is probably the hardest class I've taken at Penn because of the sheer amount of work that the homework requires. I loved the class, but it would have been really nice not to have 4 homework assignments due in 9 days at the very end of class, when other classes also put midterms and term papers. I thought it was really eye opening in terms of how programming functions in practice and thought that the homework assignments really helped me understand the material. The grading rubrics on the tests and written homeworks were really strange in that it seemed as though answers that did not exactly say what the rubric required were penalized, even if they were partially correct. That is to say, it seems like I submitted more regrades in this class than I've ever had to before, and I generally tend to shy away from submitting regrades. The TA staff was very supportive, and there were ample office hours.

Overall this course needs to be re evaluated. TA's have way too much power, even when it is not in their best interest for other students to do well as they are just competition for employment. Most of the TA's have no idea how to teach, and when they tell you something wrong, you end up losing major points on the assignment. This course is honestly one of the worst courses at Penn and needs to be restructured otherwise students will continue to take it and do poorly.

The workload for this course takes the same amount of time of all my other classes combined.....

The amount of time and effort needed to well for the average student should be considered that of a two-credit course. It is a very difficult course, but a pivotal course for computer science education.

Great course - but TAs struggled. There were many errors in Homework assignments that made the course even more difficult than it already is. I also went into office hours multiple times only to get the response from TAs: "Go to a later office hour session because I don't know"

Over, Professor Callison-Burch seems to know the subject very well, but he did have a hard time keeping interest in the lectures. They were a bit dry and not very helpful in learning the material. Like most computer science classes, the lectures are not very useful and are not required to do well. Lecture attendance should not be mandatory.

I don't think lecture attendance should contribute to grades because if lectures are really useful, the students are already at an disadvantage when they skip lectures.

This has been my favorite course so far at Penn. Every topic covered in this class weaves together beautifully with the rest, and everything felt useful in some way. The homeworks and test writing have made me a better programmer, and everything else in the class has helped me understand more deeply every bit of code.

This course is awesome, but insanely time-consuming. It should be counted as 1.5 or 2 credits. Furthermore, I find that the curve is relatively unforgiving- the curve should be higher to reflect the amount of work (sheer hours) put into the course.

Great course

The class is basically run by the TAs. Considering that they are full-time students, I think they have done a great job. However, when this happens, a lot of disorganization and miscommunication ensues. I would suggest that TAs have less responsibilities in the future.

Very good course. A lot of work, but very rewarding. I definitely understand computer science as a discipline a lot better now, and I am a lot more interested in learning more as well. It was a lot of content, but it didn't feel like it because of how interesting the content was (in addition to the mandatory homework that forced us to become familiar with the content). There was a good blend between theory (proofs) and application (programming) in the homework and in lectures.

Workload was too much at the end of the semester - I think having the last homework AND the final project due on the same day is unfair. Lecture needs to focus on explaining the difficult concepts.

"One of the most useful courses you will take at Penn", as Prof. Callison-Burch said at the start of his first lecture. No other words can describe this class more accurately.

Phrasing and specificity of instructions in assignments was subpar and caused a substantial amount of distress. Please work on rewording homework writeups so that they make more sense to those that aren't already masters of the material.

Extremely difficult but also extremely rewarding. Professor and TAs were always exceptionally helpful (and patient when certain concepts weren't sinking in). Loved this class!

This course contains a lot of valuable material, but the amount of work required creates too much stress, and hinders the students' ability to learn. Each assignment takes 30+ hours for the average student, and along with all of their other coursework it is outrageous to expect them to be able to do it all to the best of their abilities. Moreover, the TA's for this course were largely unhelpful. They often gave conflicting answers on Piazza. They created assignments full of mistakes that students wasted time trying to solve. When addressing problems with the homework that would be beneficial for the entire class to know, the answers were hidden in Piazza posts instead of integrates in a more noticeable way into the homework instructions. Furthermore, sometimes the TA's didn't know the answer to reasonable questions at all. While this class introduces useful material, I do not feel that it was taught to the majority of students. Rather, it was taught to the highest percentage who already have a grasp of the material. The course should establish more reasonable deadlines in order to ensure that students are actually learning the material instead of being constantly stressed and unable to learn.

WAY TOO MUCH WORK. Over 40 hours a week for most weeks



**Instructor Comment**

He was very kind and caring. I think he did a great job in making himself approachable to his students, and he did his best in delivering the course material to his students. Also, even though there were a lot of topics to be covered, he successfully manage to go at optimal pace so that he is not leaving anyone behind (at least not many behind).

very apathetic instructor. does not seem to care about the students at all.

Dr. Callison-Burch was overall an effective instructor. I would suggest though that for future semesters that he not go through all of the steps of examples for algorithms in the lecture slides. I found myself getting sidetracked a bit during class and losing concentration on the bigger picture of what was going on.

CCB is a legend. Never change!

CCB is clearly more interested in his research than teaching his course. For the most part, the TA's play the largest role in assisting students with the material. Overall, he's friendly and available for students when needed.

Read verbatim off the lecture slides and often did not know how to answer students' questions not directly related to the slides. It also seemed like he didn't write many of the homework assignments, since he didn't know how to answer those questions either when students asked in class. Great guy outside of class, but very dry and formulaic lecture style that made it entirely unnecessary to go to class if not for clicker attendance.

give this man tenure

Professor Callison-Burch was clearly very knowledgeable. However, his lectures were not very interesting or engaging.

He is engaging, knowledgeable, and a clear lecturer.

Professor Callison-Burch put a lot of thought into designing a class that is still challenging, but fun to take. I began taking 121 last semester with a different instructor, and had to drop it for reasons unrelated to the course. I'm so glad that I did - CCB is a great lecturer, his homeworks are well-designed, and his section of 121 covers the actual 121 curriculum and makes genuine sense. He took a challenging course and made it extremely accessible and I really appreciate it. He has also been very welcoming in office hours.

Maybe try to make the lectures more interesting than simply rehashing whatever's already on the slides. Didn't feel very worthwhile to go to lecture when I could just read the slides at home and get basically the same thing out of it.

he stumbles a bit but he's fine

Professor Callison-Burch, you boring as fuck man. You suck at making sense and stimulating interest in the class. You just talk and talk and talk and do a horrible job teaching and making no sense. You're also quite emotionless too, which damn sucks. I've spoken to you a few times and you're quite heartless.

Uncommunicative, unsympathetic to mental health

CCB is well meaning and a decent lecturer. Sometimes spent too much time walking through sleep inducing examples to completion, when more intuition about the algorithm would have sufficed.

It was pretty clear that professor Callison Burch used the provided slides from the textbook. He was fine at explaining things, but all of the examples came directly from the textbook which made it harder to find answers to questions in the book.

CCB is a great lecturer in patiently walking the class through the specifics of these algorithms. His anecdotes about real world programming was always interesting.

CCB is one of the worst professors in the entire CIS department. His lectures are beyond boring, and he fails to have a clue of what is happening outside of the lectures. He does not seem to care whether his students do well or fail and he gives the TA's way too much power in the class. He does not realize how much other assignments students have and assigns way too much work that is impossible to complete, and weeds out the students who are less knowledgeable and have more on their plate. In other words, all students cannot possibly do well in this course because of the way it is structured. Moreover, I have barely learnt anything in the course, as its focus is far from the actual material of algorithms, and it is instead how quickly you can do the homework.

Just really boring and lectures doesn't cover anything not found in the book

Professor Callison-Burch did a good job of running the courses, but I wish he would create some of his own slides in addition to the ones provided by the textbook.

He would mostly read off the slides. The real gems are the TA's.

Over, Professor Callison-Burch seems to know the subject very well, but he did have a hard time keeping interest in the lectures. They were a bit dry and not very helpful in learning the material. Like most computer science classes, the lectures are not very useful and are not required to do well.

Unfair to force a prof to teach a course when there is clearly little experience teaching this material. Bad job CIS department. Give Rajiv a full-time position.

Nice guy and accessible. However, lectures are kind of slow and boring.

He did not seem to take too much responsibility for the course and help the TA's check HW's before they were put out for students. Or, he could not effectively check the HW's as there were often errors in them at first (impossible questions etc). Either way this falls on the instructor's lap.

While his lectures were a bit too much 'point and click', he did a good job explaining the material and even sprinkled in some interesting research topics of his. He did proofs for the class when it was helpful, but other than that there was very little interaction between students and professor.

Great instructor!

Great guy, captivating, interesting, funny. The slides he uses aren't optimal, I would've preferred if he spent more time going over algorithms conceptually instead of just showing their code, especially since the written assignments wanted conceptual description of algorithms instead of pseudocode. Would have also been nice if more time was dedicated to each algorithms running time.

The professor means well, which is clear to see. However, I do believe that other professors with more time on their hands and more passion about the course would be better suited to teach this class.

CCB was an amazing teacher. It was an absolute blast to be in his class. He was very straightforward in lecture and was very clear and helpful during office hours. He even rescheduled office hours when he found out that many students had another in-major class during his original office hours. He was extremely passionate when talking about his research, both when giving practical applications of the course material and in office hours. It is even more amazing that he was such an amazing professor considering how much was going on in his personal life.

...

Class was mostly the professor reading off the slides - I didn't see much of a point in going to lecture because what was covered in lecture was exactly the same as what was in the textbooks. I wish Professor Callison-Burch spent the majority of class going through difficult concepts and proofs, instead of doing things such as explaining the API for a certain data structure (this is simple and straightforward and can be understood by just looking at the textbook).

Fun, knowledgeable and accessible outside of lectures; Prof. Callison-Burch was one of my favorite CIS professors so far

Absolutely terrible

The assignments (final project, hw10, written review homework) became too much all at once. Otherwise great instructor, learned more than I could have imagined.

Term	Spring, 2016 (2016A)	Enrollment	113	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	113	Division	-
Cross Listed Sections	-	Responses	106	Department	-
		Response Rate	94%	Subject	Networked and Social Systems

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.79	2.79	2.79	-	2% 2	9% 9	27% 27	32% 32	30% 30	100
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.37	2.37	2.37	-	8% 8	13% 13	34% 34	24% 24	21% 21	100
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	1.76	1.76	1.76	-	7% 5	28% 20	48% 34	15% 11	1% 1	71
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.89	2.89	2.89	-	0% 0	7% 5	26% 18	39% 27	29% 20	70
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.80	2.80	2.80	-	0% 0	6% 4	31% 22	40% 28	23% 16	70
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.86	2.86	2.86	-	1% 1	8% 6	23% 16	38% 27	30% 21	71
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.48	2.48	2.48	-	8% 6	15% 11	18% 13	35% 25	23% 16	71
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.06	2.06	2.06	-	9% 6	25% 17	35% 24	16% 11	16% 11	69
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.23	2.23	2.23	-	7% 5	20% 14	34% 24	20% 14	19% 13	70
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.42	2.42	2.42	-	1% 1	7% 5	51% 36	30% 21	11% 8	71
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.62	2.62	2.62	-	6% 4	13% 9	20% 14	38% 27	24% 17	71
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.01	2.01	2.01	-	14% 10	19% 13	29% 20	29% 20	10% 7	70
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.98	-	-	-	2% 1	98% 58	- -	- -	- -	59

### Comment Suggestion

Some of the assignments could be better thought out to avoid tedious tasks. For example, I once had to type out the name of every state and map it to its 2 digit postal code, which is something that took quite a while, yet was pretty unrewarding. I think I would've gotten more out of this class if I hadn't had a busy schedule. Many of the tasks allow students to get creative with them, which is great, but there is not always enough time between the start of each task and the deadline to accomplish what you really want to do. I would also like it if less of the work revolved around crowdflower or mechanical Turk.

Probably my favorite course at Penn. It has substantially affected my career goals, and I recommend everyone from every major to take it, as it will augment all of their careers and skill sets, as all of the concepts are applicable to every domain of life.

Most homework assignments are silly busy work that doesn't really teach much. The videos in particular are unnecessary. Though I understand its hard to cater to differing programming skills.

This is a course that I would highly recommend to anyone who knows how to code. A very interesting and hands on take on what the professor is passionate about. This is the type of course I hoped to take at penn.

Good class. I found it very interesting. Maybe make the class more transparent in terms of grading

I love that CCB lets us work in groups for assignments.

Lectures are not very engaging, and the assignments do not properly teach valuable skills to students. For example, many homeworks involve modifying Python code so that a particular result is reached. This ends up being an exercise about trial and error, even for some students with more experience in programming. This was especially the case with machine learning involved, since students do not learn the theories of machine learning very well before the assignment.

The class was interesting.

Such an interesting course. Very laid back, assignments are very time consuming, but they are all interesting, so there is no busywork, every assignment I learned a lot about actual real world coding, and the project looks great on a resume

Super interesting course content, but the class was very disorganized. The homeworks had fascinating premises, particularly the coding-related assignments Analyzing Data and Training a Classifier, but it was often unclear exactly what was expected of us during these assignments, which was often frustrating.

The course material was interesting but there were a lot more homework assignments than I think were necessary.

I thought it was a very poorly structured course. I never knew how I was doing in the course, until now- and I don't think I'm doing great but it all depends on this final project that we have. The homeworks are really an unnecessary amount of work. I kind of felt like a slave-worker to Mechanical Turk. I would rather create tasks than have to complete 2 hours worth of tasks

This course covered a wide range of topics, which was really awesome. The assignments were sometimes ill-defined or required a disproportionate amount of work (deduping articles for the statistical analysis....), but I think that's probably a factor of it being a relatively new course. Overall, unique and interesting!

Although an interesting concept, there seems to be a relative lack of material to merit the course existing in its current state. The course met three times a week for one hour, but on average only two of these lectures actually contained course material, as the TAs often would spend a significant portion of lecture going over the next homework assignment, and there also were a fairly large number of guest lectures (although the guest lectures tended to be very interesting).

Chill course. Not a ton of work but a lot of learning.

Awesome!

Interesting subject matter, but I don't feel like the class fully equips people to develop the final project unless you have had extensive development experience before

**Instructor Comment**

Disorganized to some extent. The entire gun violence story was pretty boring too. There's so much data out there -- why choose something politicized? Further, it would have helped if we could have started working on the final project earlier and had a little more assistance making web-apps.

I really disliked that a lot of assignments were just busy work. None of the video or peer review assignments taught me anything about the course. Adding assignments just for the sake of adding of them isn't the point of homework

Does very interesting work. Does a good job of making the lectures feel spontaneous while still having some structure. .

Although not particularly exciting in tone, the material the professor delivered was presented in a very stimulating way, connecting theory to applicable concepts in a very relatable way. I am a huge fan of Chris, and he's a good professor to have for this class no matter what level of ability you have coming into the course.

One of the best professors I've had at Penn. Truly cares about education, the course, and his field as well his students. Extremely kind, compassionate, and knowledgeable. Really feel honored to have taken multiple courses with him at Penn.

CCB is a wonderful professor and has designed a very good course. He understands how students work and how to get information across to them.

Lot of the time spent on homework assignments were on stuff like making a video, stuff that I didn't learn anything from

Very accessible and willing to help students.

I liked the professor's passion for the topic.

CCB is a fantastic professor and a great lecturer.

such a good professor, extremely interesting research, and always excited to discuss what he is doing.

Great person, extremely nice and reasonable as a professor. Not overly demanding.

I appreciated how hard CCB tried to make this class engaging, but overall it just wasn't. He sometimes went off on tangents so it made it hard to follow any of his lectures.

Clear and interesting lecturing style!

The professor is highly interested in the course material, and it's easy to see how enthusiastic he is about the course.

Good prof.

Really encouraged putting theory into practice and brought guest lecturers who were really leaders in the field. Paper readings were interesting. Loved that there were no exams. CCB was always super accessible and friendly

Tries to make lecture interesting

He's a great researcher, but not the best lecturer. I believe he would be better in a smaller setting. I found the lectures to be pretty dry and boring. However, he is great to talk to in office hours and outside of class.

Term	Fall, 2015 (2015C)	Enrollment	174	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	173	Division	-
Cross Listed Sections	-	Responses	165	Department	-
		Response Rate	95%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.22	2.22	2.71	-	8% 12	15% 22	38% 54	24% 34	15% 22	144
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.19	2.19	2.41	-	7% 10	19% 28	38% 55	19% 28	17% 24	145
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	3.59	3.59	2.80	-	0% 0	1% 1	3% 3	33% 36	64% 70	110
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.55	2.55	2.49	-	4% 4	10% 11	35% 38	30% 33	21% 23	109
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.19	2.19	2.64	-	12% 13	17% 19	28% 31	27% 30	16% 18	111
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.18	2.18	2.64	-	5% 6	21% 23	36% 40	25% 27	13% 14	110
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	1.94	1.94	2.30	-	14% 16	21% 23	34% 38	20% 22	12% 13	112
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.12	2.12	2.18	-	8% 9	25% 28	30% 33	19% 21	17% 19	110
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.92	2.92	2.82	-	6% 7	4% 4	13% 14	47% 52	31% 34	111
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	3.76	3.76	2.97	-	1% 1	0% 0	0% 0	21% 23	79% 88	112
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.30	3.30	3.15	-	4% 5	3% 3	6% 7	31% 35	55% 62	112
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	1.67	1.67	1.81	-	29% 32	19% 21	22% 25	18% 20	13% 14	112
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.94	-	-	-	6% 6	94% 94	- -	- -	- -	100



**Cheating Comment**

People send their assignments to fiverr and pay a cheap price to get their code done for them. Also people friends with TAs get more help than they should excessive collaboration on code and written assignments.

talking about homework assignments

N.A

**Comment Suggestion**

One terrible thing though is that the homeworks have poorly defined specs and you have to go search for the specs on piazza. There seems to be a lot of disagreement with TAs on the proper specs. Also, there is excessive homework. Look at the princeton course COS 226. That only has 8 assignments when we had like 10, with one being a project. Despite the professor trying to show some mercy, this class was still extremely stressful and hurt my grades in other classes. At times I was doing homework rather than going to lecture because there was so much. The project specs were a disaster. Fix the autograding software.

As already stated, a huge problem in the course was the write ups. The 120 write ups make it extremely clear what the assignment is supposed to be, but 121's write ups were extremely confusing, long-winded, and incomplete. The homework assignments were extremely interesting conceptually, but they're way too involved to have due weekly. I would have loved to have spent more time engaging with the projects, but it took everything in me just to complete them on time. Many of us were also left wondering why we had a final project at all - had we not suffered enough? It wasn't some brilliant culmination of all the concepts we'd learned over the semester. The final project was confusing, poorly organized, and overinvolved. The conceptual questions introduced on the homeworks over the semester were mostly an annoyance. Maybe if the write ups weren't so awful, the conceptual questions would have been less of a pain.

Good course, but I wish I could put very very much for the difficulty and especially for the amount of work. Not a course to be taken lightly, even by engineers and technical students.

I think that much of the work that was given in the class could have been organized and made much clearer so as to not waste student time. So much of the homework was spent doing and downloading ridiculous things that were not a part of the course. Even TA's did not know how to use this material and it hurt everyone. The assignments don't need to be easier but they should match up to what we learn better.

Too much outside time working. This class took over my life and I didn't even get rewarded for my time and effort with an okay grade

Very challenging course, and the workload is very heavy. However, the course if also extremely satisfying and the importance of the material covered with respect to software engineering is vital.

Material and coverage very good, and this course is doable in a programming-heavy manifestation. However, this version was not an ideal or even good version of that manifestation. Programming deadlines were strangely at 10:30 AM instead of midnight, causing much stress, consternation, and lack of TA availability (the strange excuse of "wanting people to go to lecture" was given). Most homeworks required two weeks of work but only had 1 week given, often due to the bizarre nature of the final project. The late policy should have always been a percentage-off system (15/25 not 25/50, like with most CIS courses), and the different straight-points system for the final project was much too punitive. Overall, the pacing was very "raw" and did not show the polish, especially on the homework side (negotiating homecoming, breaks, midterms, etc.), of a more ingrained programming course such as CIS 240 (consider the encoding/decoding assignment for example). The final project "milestone" system was an abject disaster; just give us a longer period at the end to do it consecutively, not squeeze the milestones and "neighboring" assignments with too-short deadlines (the five-day final milestone was particularly laughable) that cause below-average scores. Overall, the weightage of the homework was also too high (should have been ~40% instead of 55%). Just a poorly designed course with great intentions and great material.

The course is extremely difficult and takes over an enormous amount of time in your life, however you end up learning a lot of new information about algorithms that you would never have known without the required intensity of the course. The exams are very long but fair in questioning.



The first half of the semester was a mess but the course really improved. Exams were fair. First homework was pointlessly tedious because it took 25 hours and wasn't based on new material. Class organization could be a little better, as well as TA-instructor consistency in terms of logistics. Class could be more engaging but all in all I learned a LOT.

The TAs in this course can be extremely pompous at times. They can be very condescending when answering questions. The subject material is not that difficult but the homeworks are.

I believe a little too much content has been compressed into this course, leading to extremely high workload and stress levels. This, compounded by poor TA quality, has made the course experience very negative. Another issue I perceive is that there is often an unfair advantage for students who are friends with TAs.

The professor was of fair quality (his availability was admirable, and he clearly is passionate about the subject). However, the TA system was an extreme hinderance to this class, as many of the TAs (including the head TAs) were often unprepared for review sessions (and even, at times, recitations) and were unhelpful for general questions.

TAs were good....shout out to head TAs David and Fifi for constantly answering student questions about the assignments.

the course material is great, but if the lectures were more interesting I might have been able to pay more attention.

I loved the material. This class feels like the change from when programming was more of a vague thing that could be done given enough material from the teacher. Now I feel as if I could design nearly any code in a fairly optimal manner without any given material.

As bad as the professor was, many of the TAs were even worse. They wrote the instructions for the homework assignments, and they were so unclear that half of the assignment typically needed to be explained on Piazza. There was a new final project this semester, and it was the most incoherent, pointless assignment I have ever had the displeasure of being assigned. There was a part of it where we were literally told to copy pseudocode from a paper that was linked to in the project instructions. The majority of the difficulty in this class did not come from the difficulty of the assignments themselves, but rather from navigating the maze of Piazza posts (many of which were links to other Piazza posts that didn't even fully answer the student's question instead of an actual answer) and trying to piece together the bits and pieces of information given online with the other bits and pieces that were actually in the directions to begin with. To anyone who is not a CIS major: do NOT take this class. Believe me, it's not worth your time. To anyone who is a CIS major: I'm sorry you have to go through this.

I could've learned more in 8 hours of reading than I did in this entire course.

10/10, would feel dumber than the TAs again

Good class that I learned a lot from. However there was a LOT of material packed in which made homework assignments and studying for the exams very stressful. There were many TAs available to help including on Piazza. They seemed to be more helpful on Piazza (online/written format) than in person in recitations and review sessions though. Review sessions hosted by the TAs were often confusing and they seemed at times unable to articulate the course material in an understandable way. There were also various issues with the homeworks and final projects that resulted in the TAs and instructor making modifications to assignments after they were assigned and even close to the due date, which were hard to track due to the volume of communication flowing to students through Piazza, where modifications were announced. You will get a lot out of the class but at the expense of a lot of time and effort spent.

too much abstraction on the final project. impossible to test the correctness of the functions. I think the graph/ return(of type abstractidentifiable) implementation should be given to students to reduce the unnecessary abstraction

Incredibly difficult subject matter, seemingly impossible standards, and inhospitable environment for those not naturally gifted or with a lot of experience. Not sure what the solution is, because I understand that CS is an intentionally difficult major, but it's pretty demoralizing to work for hours and hours in a class but not have a huge background prior to the course and do poorly. It seems that there should be some kind of middle ground- no other engineering major requires this level of time and effort to even pass a course.

This class involves a lot of work, especially near the end with the final project. However, the TAs are super helpful and I appreciate all the work they put into the course. The assignments are also interesting and applicable. The material is very dense but by the end students will have a good grasp of the concepts taught in the course.

Amazing class. This is why I am a CIS major.

This course had so much potential, but because of poor organization by the TAs and professor, it became a little bit of a headache. Even on the final project, the project had to have an extended deadline because of submission and testing problems. Problems such as that were pervasive throughout the course. It was a common occurrence for the students to know more about assignments than TAs. Possibly about only 4-5 TAs generally even knew what the HW was that week.

CCB was a bad professor. I felt that I gained nothing whenever I went to his class. He read off the lecture slides provided by the textbook only. He was unresponsive to emails a few different points in the semester. When I had a problem, he admitted to not be watching the homework grading closely. There was way too much work and he was oblivious. The exams were too focused on java and not on concepts. TAs even complained about the way he taught the course. Exams were too long to finish. There was a major project that many people did not do because of the amount of other homework assignments at the same time. Worst professor that I have had.

Another professor, who noticed the radical reduction of actual course material to some basic set, noted that we are not prepared for the follow up course - CIS320 - because we were not given enough math or actual content. Personally, I feel nothing was really gained; we only delved slightly deeper into topics we had discussed in previous classes, and not in a manner where we can move forward onto more serious topics

Really great course that I feel has improved my programming by a lot.

awful

Really interesting material and really enjoyed doing the assignments. The TAs are absolutely amazing and very helpful.

Hard. TA's were very unhelpful. As far as I know the TAs made the assignments and final project, and did a poor job.

TAs are very responsible.

a lot of material is covered in this course very rapidly, which can make it challenging, but the material is a good basis for further study in algorithms and interview prep

#### Instructor Comment

For Professor Callison-Burch's first time teaching CIS 121, I believe that he did a great job covering the fields that an undergraduate algorithms course would offer. However, I would like to note about the attendance of the students declining over the semester. I've noticed that the lecture material is nearly identical to that of the Princeton University CS 121 equivalent. One of my friends took the course on Data Structures and Algorithms on coursera.org and found the same lecture style found in the online course. For the future, I would suggest having a more interactive lecture style. This could involve using the chalkboard, allowing students to build up to the algorithm/data structure in hand collectively. The slides should still be put up after lecture, but bringing up occasional questions/brain teasers for potential homework/exam questions could bring up incentives for students. As a last resort, attendance through clicker questions could be useful as a small portion in the total course grade; although, one should be wary about students that click in for other friends. I hope that this advice does not come off as negative; I just wanted to share potential areas for improvement in your next lecture assignment at Penn. Otherwise, keep up the great work!

He wasn't a masochist. I think they're quite common in the CS department. I liked that he stuck to the book material. The book is good and it's a good idea to follow it. Perhaps there could be slightly more math in this course.

I did not particularly like professor Callison-Burch's teaching. He chose to teach the course in a non-traditional fashion and I felt like I was missing out on learning important information that I may have learned had I taken the course in a different semester. Some of the assignments, particularly the final project, had very poor documentation, making them much more difficult than they should have been.

Really enjoyed the class! Focusing on the practical aspects of data structures really made the concepts understandable and helped a lot during interviews!

CCB was extremely accommodating and made many changes to the course over the semester based on our feedback. Without these changes, the class would have been unbearable. However, the overall organization of the course (especially communication between the TAs) was dismal. The TAs were extremely unwilling to answer questions directly on Piazza or during office hours, and would refer us to the write ups. However, the write ups were so poorly written that they were the reason we had questions in the first place.

I really enjoyed Professor Callison-Burch's teaching style. His use of quizzes in class (via asking us to raise our hands) really helped me see if I was actually understanding the content. He also included interview questions in the slides that were related to the content to give us an interesting application of the concepts. He was also very responsive to student feedback in the course. He changed the due dates of our homeworks from Tuesday's to Thursday's to allow students to utilize more of the TAs office hours and he calibrated the homeworks to be a little less unnecessarily soul-crushing. I think this course will continue to improve as he teaches it more because it often seemed like the homeworks were not very well developed. I always had to spend a lot of time on piazza checking how we were supposed to handle different edge cases and things of that nature that should've been included in the homework documentation. This seemed to be more of a problem in just having new homework sets and needing to do a little more refinement of them. That's my only negative comment on the course!

Very good at teaching, and very conscious of how the students are feeling. Great at communicating complicated material.

Horrible professor. Work was way too much and too difficult throughout the course, and lecture time was spent explaining concepts and barely dealing with code. Did not have an engaging class nor did he reward the students who showed up to lectures

Great professor. He does a very good job of describing why the material is important in real-life situations, and stimulating student interest.

Wasn't really organized well, the grading and assignments timing were all over the place.

ok instructor, bad course structurer

CCB is one of the nicest professors I have met in my time at Penn. He is very accessible and only wants his students to succeed.

Final project could have been more interesting, it was a little too academic for most people to find interesting. I'm not sure why we had to implement connect components and even centrality and page ranks were ultimately not used, so it felt more like busy work and didn't have a great flow. I appreciate that CCB took our mid semester feedback, the class really improved then. One thing is that I found that reading the lecture slides was just as good as going to lecture, maybe because the slides are good, so CCB may face poor class attendance. TAs really worked hard for us, seem a little overworked. I appreciate them answering all my piazza questions, but sometimes they would answer a question by just referring to the write up or java docs. This actually came across highly condescending to most students, because we can read the Java docs and write up so chances are they are ambiguous. We should have learned recurrences in class because most of us didn't know them actually.

Very good professor

The professor does a good job presenting the lecture material, and he is readily available in office hours.

He was an incredible teacher. Some found him boring, but others found him passionate and stimulating.

Dr. Callison-Burch is very knowledgeable about the subject matter and is clearly enthusiastic for the course, but his lecturing skills could use some improvement. The lectures were not particularly helpful, since all the homework required reading from the textbook, and the lectures added nothing new. That is, if you didn't understand a concept in the textbook, the lectures would not clear anything up.

Assignments were challenging and rewarding; only wish that the instructor would answer the questions brought up

Chris is the biggest bum of a professor I have ever had. He does not even know how to teach simple algorithms and takes his slides from other professors, which means that he's too lazy to put any real work into his class. I stopped going to class after September and still beat most people on the programming assignments, which means whatever he did in class is probably useless. Thanks to his good TAs, he was bailed out and prevented from looking like a complete screw up.

He should try to stimulate the students interest more during class time.

Honestly I went to class maybe three times this year, many of my answers should be ignored, and there should be an N/A option.

This is one of the worst professors I have ever had. Every lecture was ripped straight from the textbook (as in the lectures were bought from the publisher). It was so identical that going to class was pointless and it was easier and more helpful to just read the book. The lectures were delivered in the most boring voice imaginable and it was impossible to pay attention for more than 2 minutes at a time. This class should not be taught by this professor. He didn't seem to care about it at all and he should just stick to his normal NETS class, where he is apparently competent (which I honestly doubt).

Good Professor.

The professor is a very nice guy. However, the speed at which he goes through the subject matter is disconcerting and it is very difficult to keep up. Additionally, the explanations of topics are not very thorough and are often dependent on the published slides from the book which do not explore all aspects of the course.

Wastes time in lectures going over stupidly simple stuff, skipping over important details. The homework assignments are both irrelevant to what we're learning, and written horribly, to the point that the biggest challenge is to figure out exactly what the professor wants our programs to do.

Awesome guy, can't say enough good things about him. Really great in class and quietly funny about stuff. I went to lecture and payed attention after pulling all-nighters because I didn't want to miss a class of his.

Good professor. Seemed friendly and genuinely interested in teaching the course and in the students' success. Was responsive to feedback from students throughout the class and made welcome but fair adjustments to policies as needed.

Clearly a capable professor, has excitement for teaching and the material, but didn't seem experienced in communicating the subject matter of a lower level course that was compelling and clear. Also, the course staff and material were both extremely intimidating and difficult to approach - there's a culture in the CIS department that is inhospitable to anyone who comes into CIS classes without a background in computer science, and a general culture of disdain for those who aren't naturally gifted or experienced that made it hard to ask for help.

Professor Callison-Burch is extremely nice and friendly. I think he could be more engaging though. Not sure if it's because it's his first time teaching the course, but in class sometimes he doesn't answer questions very confidently even though I'm sure he knows the topics!

Just not engaging at all. The course material is very interesting to me but the class was hard to sit through. Also the hw assignments were extremely long and difficult and were sometimes disconnected from the current course material.

Definitely cares about the class and feedback.

My favorite class of the semester. Thank you CCB for making class so interesting and working hard to integrate student feedback.

He might be the nicest person I have ever met. Honestly, a great guy, but perhaps not the best at communicating the material or making the material interesting.

CCB is a very good instructor, but really needs to pick a better set of materials from which to teach.

CCB was a bad professor. I felt that I gained nothing whenever I went to his class. He read off the lecture slides provided by the textbook only. He was unresponsive to emails a few different points in the semester. When I had a problem, he admitted to not be watching the homework grading closely. There was way too much work and he was oblivious. The exams were too focused on java and not on concepts. TAs even complained about the way he taught the course. Exams were too long to finish. There was a major project that many people did not do because of the amount of other homework assignments at the same time. Worst professor that I have had.

Taught the entire course through slides from Princeton University, all material directly from textbook, nothing gained by going to class. He also structured the material and assignments so awkwardly that the entire course felt like a struggle to determine what we should even be doing.

Definitely needs to spend time and make sure that he has a complete understanding of all of the lecture topics, so that he is not caught off guard by completely reasonable questions. Especially on the topics of sorting, he seemed to be reading off of the slides and couldn't explain what they were saying when asked in-class, either giving a confusing non-answer or admitting that he did not know. Overall, liked him as a professor in the second half where he seemed to be stronger, but really needs to round out his knowledge of all the material he is teaching, beyond what is stated on the slides.

awful

Great knowledge of material but would've appreciated more asking questions to the students in the lecture. In CIS 160, Prof. Gandhi would always keep students on their toes and it made us have to actively think and participate much more. In your lecture this year it was more of a relaxed style where we went through the slides -- as a result we didn't even have to be there, we could've just went through the slides on our own, or went on Coursera and watched Prof. Sedgewick's recorded lectures. I think I would've enjoyed being prompted algorithm questions during class and having to think actively then. Overall, good course.

Profess Callison-Burch is really sweet and really cares about his students. I think he's a fantastic person, and I think he really gave a lot to this class. That being said, I felt like lectures often times were not worth going to because they were basically straight out of the textbook and I could find the same slides online. He did write fair exams, though. The exams were a bit too long... all of them.

the professor in general is quite good. He is a very nice person. He covered a lot of material very quickly which I think helped students learn a lot, but it was challenging to keep up with the pace

There were some times when CCB didn't know the answers to some questions that were asked in class, which I think he should have been prepared for. I think it would have helped to present more than what was in the lecture slides. There were also kinks in some of the homeworks, especially the final project, that needed to be worked out. But he was a good professor and very approachable.

Term	Spring, 2015 (2015A)	Enrollment	51	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	51	Division	-
Cross Listed Sections	-	Responses	50	Department	-
		Response Rate	98%	Subject	COMPUTER AND INFORMATION SCI

Average Ratings					This Instructor Only Worst Rating...Best Rating					Responses
Question and Scale	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.24	3.24	3.24	-	0% 0	2% 1	16% 8	37% 18	45% 22	49
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.90	2.90	2.90	-	2% 1	10% 5	20% 10	31% 15	37% 18	49
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.62	2.62	2.62	-	2% 1	7% 3	33% 14	40% 17	17% 7	42
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.29	3.29	3.29	-	0% 0	0% 0	15% 6	41% 17	44% 18	41
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.40	2.40	2.40	-	13% 5	13% 5	23% 9	28% 11	25% 10	40
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.98	2.98	2.98	-	2% 1	12% 5	12% 5	33% 14	40% 17	42
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.86	2.86	2.86	-	12% 5	2% 1	19% 8	21% 9	45% 19	42
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.68	2.68	2.68	-	2% 1	5% 2	34% 14	39% 16	20% 8	41
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.83	2.83	2.83	-	0% 0	19% 8	17% 7	26% 11	38% 16	42
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.76	2.76	2.76	-	0% 0	10% 4	29% 12	38% 16	24% 10	42
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.74	2.74	2.74	-	0% 0	12% 5	21% 9	48% 20	19% 8	42
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	1.74	1.74	1.74	-	26% 11	17% 7	21% 9	29% 12	7% 3	42
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 38	- -	- -	- -	38



**Cheating Comment**

But you might want to double check the robustness of the autograder for the student homeworks.

**Comment Suggestion**

Has potential to be a fun course. I just found that the lecture slide-exclusive teaching style counter-productive.

The course was of above average quality despite being so new. There are still a few kinks to be worked out, but the assignments are incredibly interesting and innovative and one learns a lot from them. This course was drastically different - in a good way - from the other computer science courses I have taken.

I really enjoyed the language research project more than the "design a new homework" project. I get the motivation behind doing it, but I truly just don't think there's enough time for students talking multiple classes and participating in extracurriculars to do a good job on this project. You definitely gave a good bit of time for the project, but remember that if a student takes 5 classes, she can only devote 20% of her academic time to it.

Great course, really lets you explore your own style of research in machine translation.

Pretty interesting course derailed by poor organization. I enjoyed the course material a lot, but the class quickly became frustrating and difficult to deal with due to poor work on the part of the TAs, which were left to manage too much of the class. \* Grading guidelines (achieving some quality threshold necessary to receive x points of credit) not released until well after an assignment is due, and often contradicting thresholds that were earlier released as we were doing the assignment. Instructors sometimes hinted that thresholds would be changed, without releasing additional information. \* Additional specifications and associated project turnins not released until \_hours\_ before an assignment is due, and only after we asked for them. \* Arrogance or condescension from TAs who expected students to have experience with machine learning. Going to office hours was not enjoyable. I found it difficult to have conversations about the course (eg. asking if we could have partners in future homeworks was met with laughter.) \* It was not definitively announced that projects would not be done in groups (as in previous years) until after the drop deadline. I had been really looking forward to this part of the class and I was really disappointed. I thought that I got a lot more out of talking about the final project and the language research project with classmates as it let me discuss and re-evaluate things I didn't understand. I think I would have understood a lot more overall if I had been able to do talk about each homework with a group, even if the quality thresholds were appropriately raised. On the plus side, I thought the material in this course is really cool and it's great that we do learn a good deal about machine translation as a field from taking this course. I really liked that the last few weeks of lectures are guest lectures showing what the current research is! An \_actually enforced\_ prereq in machine learning would have improved this course for me. I was told again and again during the course that I should use "machine learning" to do my projects, with little to no other information. I would have enjoyed the course a lot more if I had taken an ML course beforehand.

I loved CIS 526, and it was easily one of my favorite computer science courses I've taken at Penn. I really liked how the professors and the TA focused less on "grades" and the mechanics of the class, and this actually made the "learning" a lot more fun. The assignments were very open to the students' creativity, and I soon learned that I could get as much from the class as I'm willing to put in. The class really gave us a taste of what it's like to be a researcher in a new field, gathering knowledge from RECENT articles, trying new and crazy ideas, and seeing results. Great course!

Overall, I really enjoyed the course structure, with the challenging programming assignments, and the evaluation metrics where you are competing with other students. This is great for open ended problems in AI, because you can always provide some answer, however simple, but experimentally trying various approaches to solving it, with the drive for a "better" score per some evaluation metric is perfect. The homeworks themselves were challenging, and the emphasis on experimentation allowed for tons of different ways to try and solve the problem, the result of the experiments being if they were better/worse than the baselines. The term project, creating a homework assignment suitable for a future class (and this class) was excellent. To see our homework completed by other students was very cool, and to know it might be used in the future is also cool. The language project, helping with research on low resource languages, was also great. Nice to know the work we do might get used to help improve resources available for other languages. Having students crowdsource the evaluation of other student reports is also a great idea, and with the TAs/instructor to quality control the results, it is a very innovative solution. Overall, a great modern approach to teaching and evaluation.



While the professor was great and the projects were interesting and fun, I thought that the TA's did not do a great job of managing the course. There was a troubling trend in this class where the TA's consistently failed to provide submission guidelines for projects until the evening that the project was due. In some cases, they even changed the submission guidelines only a few hours before the deadline. For those students who have other commitments outside of school, having to be available to submit projects (and possibly modify them to conform to changing submission guidelines) in the window of a few hours before deadline was inconvenient, if not significantly disruptive.

Overall, I liked the course and learned a good deal from it. The format was very relaxed and the work load wasn't terrible. I liked the leader board system for the homework since it allowed me to get immediate feedback on my submission and it encouraged competition. The content was interesting and I feel that I could come up with applications of the techniques described even outside of machine translation. Only complaint I have is that I would have preferred it to be scheduled earlier, but I realize that is not something the course can control.

If you are interested in natural language processing, this is the course to take. All assignments are really good and help you learn a lot. This is an application based class, where you could experiment with different machine translation techniques and where "sky is the limit"! One course that I highly recommend!

Great course, learned a lot. Would have been in class more if the lectures were more engaging. Slide can get bland.

It was a very nice course. There was a lot to learn. The grading should be lenient since everyone put in considerable amount of effort. The range of A grade should be wider.

Thanks for a great course. Have an excellent summer!

The course is more difficult than expected especially if you enter with minimal experience with Machine Learning.

This was a great course for the first month or month and a half, and I definitely learned a lot about machine translation systems during that time. The first two homework assignments were definitely solid. At some point, though, I feel like I stopped learning stuff that was worthwhile/interesting, and the remaining homeworks mostly just involved adding little tweaks and hacks to the given code; there was little in terms of implementing and understanding the stuff that MT is actually about. Really, though homeworks 3 and 4 sucked compared to 1 and 2.

He's a great professor, but his lectures are incredibly dry. I felt like he was just repeating the content in the textbook. If he focused more on explaining the math behind the models, like on the chalkboard, then the lectures would be significantly more stimulating + more helpful for assignments.

CCB was incredibly friendly and more than willing to help you when you needed it. My only complaint is that I did not find his teaching style very engaging. I'm not sure how difficult it is to teach the course materials without using slides, but anytime I'm not actively engaged in writing down notes while in class, I'm falling asleep. The exclusive use of slides to teach the course materials was quite detrimental in the learning experience.

Professor Callison-Burch was very knowledgeable and passionate about the subject.

I really wish you would make the class more mathematically rigorous. You fly through the math in lecture, if you don't skip it entirely, but the math is why this is a graduate-level course, you know? I found that I learned about implementing pseudocode in Python, not about machine translation, and that's kind of a shame.

One of the best instructors at Penn. He is extremely accessible, nice, and fair with grading. I definitely recommend MT as it is a great class, but really you should just take any class taught by this professor.

Excellent professor. Very approachable and makes classes and assignments interesting.

I think the instructor is very good with his material. The material could sometimes get challenging and dry but Chris was able to answer everything in a simple and succinct manner. He is very approachable with various topics some of it a little off the course material.

#### Instructor Comment

I loved Professor Callison-Burch. He is genuinely a very kind person, and obviously a brilliant pioneer in his field of Machine Translation. My one suggestion is that I wish sometimes he had utilized the chalkboard more, as that may have helped him explain some of the harder content a bit better. I cannot wait to TA for CCB in CIS 121 next semester!

Excellent lectures, knowledge on the subject matter, ability to relate the information to students. I really enjoyed the structure of the course, with the programming assignments in a competition format, as well as two interesting projects. Additionally, professor provided good support for projects after class. The professor has good contacts in the MT world as well, and the guest lecturers he provided were very strong. Superb integration of crowdsourcing into the class, with respect to student evaluations of other student reports, with the TAs serving as quality control. Overall, the best professor I've had at Penn thus far.

Great Professor.

I appreciated that the professor made the material very accessible, and went out of his way to make some of the drier parts more interesting. The guest speakers were great. I enjoyed the project system of grading.

The instructor is very friendly and enthusiastic about the course content. He certainly knows the topic very well and his lessons are generally easy to understand. As for suggestions... I suppose that every now and then in his lectures that he assumes that a lot of people in the class have a linguistics background, which is a fair assumption, but as a computer science major, sometimes I need to have something clarified.

One of the best classes I have attended at Penn. Chris is absolutely one of my favorite professors! It is very easy to reach him and get help on various machine translation related topics.

CCB is seriously awesome. I'm so glad I got a chance to take a class with him! The hype was met. He's really chill, and clearly has passion for the subject. I went into it really scared and worried because of my lack of background in AI/ML, but he made the course really accessible. To be honest, though, I don't think this course belongs in the 500 level. But back to CCB. He made himself accessible all the time, was always reachable via email or G+/Skype. He is very approachable. Also, I'm super impressed with the speaker series we had at the end. It was very stimulating.

The instructor was enthusiastic and effective. He successfully kept the class on track and made sure he imparted a deep understanding of the material. He was always open to questions before, after, or during class, and he would help us as much as he could when we got stuck on an assignment.

Chris has been my favorite instructor at Penn and I've really enjoyed exploring his field through his courses.

Term	Fall, 2014 (2014C)	Enrollment	48	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	48	Division	-
Cross Listed Sections	-	Responses	48	Department	-
		Response Rate	100%	Subject	Networked and Social Systems

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.55	3.55	3.55	-	0% 0	0% 0	9% 4	27% 12	64% 28	44
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.16	3.16	3.16	-	2% 1	0% 0	16% 7	43% 19	39% 17	44
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	1.45	1.45	1.45	-	18% 7	32% 12	39% 15	8% 3	3% 1	38
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.26	3.26	3.26	-	0% 0	5% 2	18% 7	23% 9	54% 21	39
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.54	3.54	3.54	-	0% 0	0% 0	10% 4	26% 10	64% 25	39
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.51	3.51	3.51	-	0% 0	0% 0	10% 4	28% 11	62% 24	39
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.03	3.03	3.03	-	0% 0	10% 4	15% 6	36% 14	38% 15	39
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.67	2.67	2.67	-	3% 1	5% 2	36% 14	36% 14	21% 8	39
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.92	2.92	2.92	-	0% 0	11% 4	24% 9	29% 11	37% 14	38
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	1.90	1.90	1.90	-	3% 1	23% 9	59% 23	13% 5	3% 1	39
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.13	3.13	3.13	-	3% 1	3% 1	13% 5	44% 17	38% 15	39
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.89	2.89	2.89	-	3% 1	3% 1	24% 9	43% 16	27% 10	37
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.94	-	-	-	6% 2	94% 33	- -	- -	- -	35

### Cheating Comment

Homework copying

General free-riding during group projects. There should be optional solo projects to avoid this behavior.

No

### Comment Suggestion

Really enjoyed the work; would have been nicer to be even more project-based.

This class is very interesting for its real-world applications.

I don't have a strong coding background so the learning curve was tremendously steep - but I appreciate the group projects where others could help me - it wasn't easy but I worked very hard to keep up and we did it.

I probably could have learned more from the class if homeworks were a bit harder - but hey, I'm not complaining.

Crowdsourcing itself is not a well-organized topic, but the class was well organized enough to mitigate this problem. Particularly, the weekly homeworks fit well together, and helped to motivate the course.

The class is very well designed! We learn a lot regarding machine learning classification and python in terms of programming, and are encouraged to be creative for the final project. It was a very happy experience and I learned a lot about this cutting edge field of crowdsourcing - very useful thing to bring up in job hunts! Also Ellie is the best TA I've ever had and she is very helpful and encouraging.

This is a great class.

Super interesting course, very nice and accessible professor.

Great class

Great, unique course. It's an incredibly new and developing fields, so the fact that Penn actually has a course dedicated to it is actually impressive.

Really interesting class with a manageable work load

### Instructor Comment

CCB is a great professor, very knowledgeable and helpful when needed.

Chris is an awesome teacher.

Very knowledgeable and kind - his research is phenomenal and new which makes it very interesting.

Professor Callison-Burch is very organized with his lectures and manages to keep all students engaged and interested. He is accessible outside of the classroom, and is easy to approach regarding any problems or questions.

CCB was great. He was young and relatable and real and understanding and entertaining and communicative. He taught class well and tried to make it interesting for us. The classes he taught that were not directly related to the homework were interesting and I'm glad I went to class.

Clearly very dedicated to the class - both the topic itself and the students.

Enthusiastic about the topic; very friendly and warm personality

I really enjoyed Professor Callison-Burch's teaching style, and he made an effort to drive my personal interest and that really paid off for me.

Chris is very nice and experienced in the field of crowdsourcing, and very close with his students. I really like taking his classes.

Probably the best professor I've had at Penn so far. I learned something from every assignment, and the amount of work each was directly correlated to how much I learned.

The coolest part of this class is that Chris is one of the leading researchers in this field. It's really cool to get an inside perspective.

I really like Chris. He's a great guy. The content of his lectures is interesting, but I generally found it pretty dry and hard to stay engaged with. In general, perhaps if there were fewer all-text slides and more graphics, charts and tables, then it would be easier to follow.

Term	Spring, 2014 (2014A)	Enrollment	25	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	25	Division	-
Cross Listed Sections	-	Responses	23	Department	-
		Response Rate	92%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.48	3.48	3.48	-	0%	0%	9%	35%	57%	23
					0	0	2	8	13	
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.26	3.26	3.26	-	0%	4%	9%	43%	43%	23
					0	1	2	10	10	
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	2.86	2.86	2.86	-	0%	5%	23%	55%	18%	22
					0	1	5	12	4	
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.27	3.27	3.27	-	0%	0%	14%	45%	41%	22
					0	0	3	10	9	
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.00	-	0%	0%	27%	45%	27%	22
					0	0	6	10	6	
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.18	3.18	3.18	-	0%	0%	27%	27%	45%	22
					0	0	6	6	10	
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.00	3.00	3.00	-	0%	5%	27%	32%	36%	22
					0	1	6	7	8	
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.10	3.10	3.10	-	0%	0%	33%	24%	43%	21
					0	0	7	5	9	
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.23	3.23	3.23	-	0%	5%	9%	45%	41%	22
					0	1	2	10	9	
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	2.73	2.73	2.73	-	0%	0%	32%	64%	5%	22
					0	0	7	14	1	
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.27	3.27	3.27	-	0%	5%	0%	59%	36%	22
					0	1	0	13	8	
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	1.50	1.50	1.50	-	41%	9%	18%	23%	9%	22
					9	2	4	5	2	
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	0.95	-	-	-	5%	95%	-	-	-	19
					1	18	-	-	-	

**Comment Suggestion**

Leaderboard is a good idea. Kinda wish i understood more things though. Cool information.

Really a very good course. It teaches a subject in which research is still happening now, so I always felt like I was on the edge of what was going on in practice. Very applicable to anybody interested in AI, machine learning, or NLP, even if you don't have much experience in these fields.

It is a great course indeed.

Although this course does not have any prerequisites, students may feel daunting if they did not have great interest in natural language processing and solid mathematical background. The difficulty curve of projects is steep, and it seems only those who are really interested to the topics would learn a lot from this course.

The final project was a nice idea but not too well implemented. It is very hard to pick up another student's assignment when there is no clear interface or input/output protocol that everyone is following.

**Instructor Comment**

Reads off the lecture slides, which is fine but I guess for classes where we have to derive equations, I learn better with chalkboards and derivation. Other than that, good professor.

Excellent course - I am very happy that I got to take it. Professor Callison-Burch is a great teacher, and the most accessible professor I've had at over my 4 years as an undergraduate. Overall, I would strongly recommend taking this course with him.

Excellent instructor!!

Chris is a nice and cultivated person who is happy to see student with interests. He is one of the leader in his field and has made a lot of contributions to the foundation of machine translation. He interacts with students with pleasure and students interested in his topic seem to have a lot of fun.

Lectures are very enjoyable. Prof. should try to "upspeak" less, it sounds less confident and professional.



Term	Fall, 2013 (2013C)	Enrollment	26	School	School of Engineering and Applied Science
Activity Type	LEC	Eligible	26	Division	-
Cross Listed Sections	-	Responses	19	Department	-
		Response Rate	73%	Subject	COMPUTER AND INFORMATION SCI

Question and Scale	Average Ratings				This Instructor Only Worst Rating...Best Rating					Responses
	Instructor	Section	Course	-	0	1	2	3	4	
<b>1 Overall quality of the instructor.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.47	3.47	3.47	-	0% 0	0% 0	5% 1	42% 8	53% 10	19
<b>2 Overall quality of the course.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.11	3.11	3.11	-	0% 0	0% 0	21% 4	47% 9	32% 6	19
<b>3 Please rate the difficulty of the course.</b> <i>Scale: 0 to 4: Easy, Somewhat Easy, Neutral, Somewhat Difficult, Difficult</i>	1.59	1.59	1.59	-	6% 1	41% 7	41% 7	12% 2	0% 0	17
<b>4 Instructor was appropriately accessible outside of class time.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.29	3.29	3.29	-	0% 0	0% 0	6% 1	59% 10	35% 6	17
<b>5 Overall quality of the TA(s), if applicable.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.63	3.63	3.63	-	0% 0	0% 0	13% 2	13% 2	75% 12	16
<b>6 Instructor's ability to communicate the subject matter.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	3.47	3.47	3.47	-	0% 0	0% 0	18% 3	18% 3	65% 11	17
<b>7 Instructor's ability to stimulate student interest.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.94	2.94	2.94	-	0% 0	12% 2	24% 4	24% 4	41% 7	17
<b>8 Value of assigned readings.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.65	2.65	2.65	-	0% 0	6% 1	41% 7	35% 6	18% 3	17
<b>9 Amount learned from this course in terms of knowledge, concepts, skills and thinking ability.</b> <i>Scale: 0 to 4: Poor, Fair, Good, Very Good, Excellent</i>	2.82	2.82	2.82	-	0% 0	6% 1	41% 7	18% 3	35% 6	17
<b>10 Please rate the amount of work required for this course.</b> <i>Scale: 0 to 4: Very Little, Little, Neutral, Much, Very Much</i>	1.65	1.65	1.65	-	6% 1	24% 4	71% 12	0% 0	0% 0	17
<b>11 Would you recommend this course to a major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	3.47	3.47	3.47	-	0% 0	0% 0	18% 3	18% 3	65% 11	17
<b>12 Would you recommend this course to a non-major?</b> <i>Scale: 0 to 4: No, May Not, Would Consider, Yes, Strongly</i>	2.94	2.94	2.94	-	0% 0	0% 0	41% 7	24% 4	35% 6	17
<b>24 To your knowledge, has there been cheating in this course?</b> <i>Scale: 0 to 1: Yes, No</i>	1.00	-	-	-	0% 0	100% 15	- -	- -	- -	15

**Cheating Comment**

none

**Comment Suggestion**

The course was relatively easy. I recommend it to both CIS major students and students who have partially finished the intro track of CIS. The difficulty of the class fell somewhere between CIS120 and CIS121. The material was definitely interesting and the homework assignments weren't that much work. Great class.

I wish the coding assignments were longer (with an emphasis on learning Python in the throughout). The assignments as they were weren't enough to get a good grasp on an unfamiliar language. Overall, the course was enjoyable, and it changed my perspective on the human computation field of computer science.

**Instructor Comment**

Professor Callison-Burch has setup a curriculum that is both new, unique, and exciting. He's clearly an expert on the topic material and he definitely provides a lot of interesting insight into the various subtleties of crowdsourcing. However, his lectures tend to be somewhat dry and he also does not incentivize students through any coercive means to attend lecture, so there's quite an attendance deficit. However, I've found that unlike many other courses, I actually felt guilty for not coming to lecture. It's clear that Prof Callison-Burch is very interested in the topic at hand and his passion for the material comes across in his lectures. Thus, it makes me feel bad when I do skip, so I still make an effort to show up to class. Prof Callison-Burch also invites a whole host of guest lecturers who are also very knowledgeable about the topic and the guest lectures are definitely worth attending. Overall, the class was very excellently set up, but Prof Callison-Burch should work on developing a more engaging and stimulating lecture.

Chris was a really cool professor teaching a subject matter that hasn't been taught before at Penn. His passion for what he's teaching really shines through, which makes the class very enjoyable.