



DATA 11800 2, STAT 11800 2 - Introduction to Data Science I - Instructor(s): Susanna Lange

Project Title: **College Course Feedback - Winter 2024**

Number Enrolled: **80**

Number of Responses: **32**

Report Comments

Opinions expressed in these evaluations are those of students enrolled in the specific course and do not represent the University.

Creation Date: **Thursday, March 28, 2024**

What are the most important things that you learned in this course? Please reflect on the knowledge and skills you gained.

| Comments |
|---|
| Basic Python coding and basic statistics/data analysis. |
| Learned the basics of Python, NumPy and Pandas in terms of working with data sets. Also learned the basics of matplotlib for data visualization. |
| Statistical analysis techniques and data processing methods in Python (Jupyter Notebook). |
| I learned the basics of coding in Python starting from no prior knowledge and learned how to interpret data with and without code. |
| How to visualize and manipulate data using Python. This involved statistics as well. |
| Bootstrapping, Hypothesis Testing, How to code in Python |
| The lectures and optional labs contributed to well–rounded understanding. |
| Coding, Statistics, Data Visualization, Manipulating Data |
| Use pandas and matplotlib. Learn why data science is important. |
| I learned what data science is and the basic coding and probability around data science. It was very much a basic intro to data science class. |
| Basics of coding with Python and methods of statistical analysis |
| Best course taken at this schools amazing |
| This course gave me great statistical analysis skills. |
| Numpy, Pandas, Python Basics, Probability, Hypothesis Testing, Data Collection, Visualization |
| Pandas and Numpy |
| I learned how to effectively code in python and analyze data frames, and also the basics of probability and sampling with experiments and observational studies. |
| I learned the basics of coding in Python and was introduced to statistical methods. |
| python |
| Python and some statistics |
| Data analysis using Python. |
| Learned introductory data science concepts – learning basic Python and using the Numpy and Pandas modules to manipulate data. Then learned about statistical methods like hypothesis testing and bootstrap intervals. |
| A/B testing, bootstrap intervals, Pandas, Numpy, sampling bias |
| Learned how to work with python and basics of statistics |
| hypothesis testing, bootstraps, confidence intervals, basic coding using Pandas |

Describe how aspects of this course (lectures, discussions, labs, assignments, etc.) contributed to your learning.

| Comments |
|---|
| The labs and homeworks definitely helped put what we learned in lecture in practice and were very necessary to understand the content. |
| I found the jupyter lecture notebooks pretty helpful. The homework as well, while challenging at times, was very helpful in getting me used to writing code and recalling specific functions and methods. |
| The labs were very helpful for learning, as they provided a way to practice coding with less pressure than homework (b/c the labs were for extra credit). The lecture notes were also very helpful as they allowed you to see sample code for everything we were doing. |
| Lectures are conducted in a manner that allows students to practice their abilities in real time, following the lecture content with a Jupyter Notebook with relevant information and examples. Homeworks are relatively straightforward, and labs are optional, but provided multitudes of additional practice, as well as extra credit opportunities. |
| Lectures were very helpful for understanding the basics of coding, and the interactive lecture format (you go through the code on your own computer as the class moved on) was incredibly helpful for me, as I was actively gaining practice while learning the material. Additionally, the homeworks and labs reinforced the content cumulatively, meaning that I did not need to study in depth for the final exam. |
| Lectures were helpful, but assignments and labs were the most helpful. |
| Labs were super helpful to reinforce the ideas we were learning, lectures were sortve helpful but very slow paced |
| Lectures were understandable and office hours were the best. |
| Lectures were pretty interesting. They really help consolidate learning. Assignments were based on lectures and labs helped with extra reinforcement. Labs are a bit long though... |
| Very hands-on and straight-forward lectures. Fun homework and super interesting midterm project. |
| The lecturers were super organized and well-structured, and they helped contribute to my learning. |
| The lectures and the assignments contributed the most to my learning. |
| Labs were the best – huge amount of work but hugely helped in learning |
| Homeworks and lectures with Jupyter Notebooks were extremely helpful |
| Lectures were extremely helpful and engaging, and reinforce content on the homework and labs |
| Assignments and Lab helped me gain a better understanding of how to construct data frames and use methods/operations on them |
| Lectures were very helpful as the professor taught the concepts very well. The homeworks and labs also helped me understand concepts further. |
| The optional lab assignments and homework were excellent at demonstrating how what we learned in lecture worked in practice. The course also felt well-organized: each lecture built upon the last and included reminders of earlier-introduced concepts relevant to the new topic at hand. |
| lecture slides gave good examples |
| The lectures and lecture notebooks were very helpful in learning how to use Python. Homework assignments went over what was covered in class, and they provided good practice on the material, as did the labs |
| lecture were helpful |
| Lectures were a little effective, but the homeworks and the labs helped me learn in a much more hands-on manner which I think was more effective for me. |
| Labs were very helpful for hw |
| Felt as though the labs, homeworks, and exams were very useful for learning |
| the lab assignment were useful, and so were the homeworks. |

Please respond to the following:

| | Mean | Median | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|--|------|--------|-------------------|----------|---------|--------|----------------|
| This course challenged me intellectually. | 4.55 | 5.00 | 0.00% | 0.00% | 3.45% | 37.93% | 58.62% |
| I understood the purpose of this course and what I was expected to gain from it. | 4.62 | 5.00 | 0.00% | 0.00% | 0.00% | 37.93% | 62.07% |
| I understood the standards for success on assignments. | 4.34 | 4.00 | 0.00% | 3.45% | 0.00% | 55.17% | 41.38% |
| Class time enhanced my ability to succeed in graded assignments. | 4.31 | 4.00 | 3.45% | 0.00% | 6.90% | 41.38% | 48.28% |
| I received feedback on my performance that helped me improve my subsequent work. | 4.21 | 4.00 | 0.00% | 3.45% | 10.34% | 48.28% | 37.93% |
| My work was evaluated fairly. | 4.48 | 5.00 | 0.00% | 0.00% | 3.45% | 44.83% | 51.72% |
| I felt respected in this class. | 4.50 | 5.00 | 0.00% | 0.00% | 3.57% | 42.86% | 53.57% |
| Overall, this was an excellent course. | 4.45 | 5.00 | 0.00% | 3.45% | 3.45% | 37.93% | 55.17% |

Additional comments about the course:

| Comments |
|---|
| Learning Python was a steep learning curve. Very fast-paced class and easy to fall behind, especially if you have no prior knowledge of Python like me |
| Covers a variety of coding and statistical topics. Even for those experienced in computer science or who have taken multiple statistics courses, the class provides still insight and experience toward data science techniques, although it may not be as intellectually challenging. |
| The course elements are very well designed, at least for someone of my learning style. I feel like there was just the right amount of material for me to understand the content without having to do lots of extra studying, even though I came in with no coding experience. |
| I enjoyed this course and Prof. Lange was good at responding to questions and helped me understand concepts conceptually. This helped a lot with coding etc... |
| Goes pretty fast if you know nothing about coding. If you have some kind of background on it, very easy and you can concentrate on really learning what it has to offer rather than having to basically speedrun coding in python. |
| If you have little to no prior coding experience, like me, this class may be a bit challenging and overwhelming for you. It is pretty fast-paced, so you have to do a lot of code learning on your own in your free time. |
| This is a very ambitious number of topics to cover in just 9 weeks, especially considering the fact that the course assumes no prior knowledge of statistics or coding. I was fine because I had experience in Python, but I found the statistics portion to be incredibly difficult and I had to spend a lot of time to make sure I understood enough of it to feel like I could do well on the final. |
| Felt the final was very hard and labs could be weighted more |
| Homework questions were poorly worded and sometimes unclear as to what is expected of the student. Final exam was difficult due to unsuccessful communication of expectations |
| Labs gave 5% extra credit. This was a cake walk compared to CMSC 141 |
| Professor Lange is an excellent teacher and i would recommend this class to any data science students |

I would recommend this course to:

| | No | Yes |
|---|-------|---------|
| Highly-motivated and well-prepared students | 0.00% | 100.00% |
| Anyone interested in the topic | 3.45% | 96.55% |

Thinking about your time in the class, what aspect of the instructor's teaching contributed most to your learning?

| Comments |
|---|
| The polls were helpful in truly understanding concepts. The lectures were also pretty useful however I don't think you miss out on much if you just read the notebooks instead of attending the lectures. |
| The instructor did a good job at stopping to explain the code during lectures, as opposed to just showing the code and running it. |
| Prof. Lange ran lecture at a good pace, so I never felt like I was falling behind or that lecture was a slog to get through (except for when it was going over statistics content I knew from AP Stats in high school). |
| Clear instruction in lecture. |
| The prof is super super super nice, understanding, and helpful. She is very friendly and is always willing to help you out in office hours. For a first-time DS student, I can't imagine a better prof for this class |
| She always fielded questions and simplified concepts well. |
| Responsiveness to questions and Lecturing |
| Her motivation and interest on the topic. Her good attitude and kindness definitely helped. |
| Dr. Lange is a great professor. She is super knowledgeable and tries to make the class engaging. She also does a great job making herself available for office hours and extra help. |
| I liked the examples that Professor Lange used to introduce new concepts, and the lectures even had opportunities to test our knowledge so that I felt like I was understanding processes as we went through them. I thought she had a good idea of what were some things that might require more explaining and would cause the most confusion for people, so she adjusted course time and added more examples to make sure that difficult theoretical things were more accessible. Lange was a great professor. |
| Great office hours |
| The jupyter notebooks helped students organize centralized areas to review and study |
| Lectures – very helpful. Dr. Lange would always take questions to ensure everyone is on pace with her. |
| The jupyter notebooks help me follow along with what the professor is talking about |
| The professor was very engaging during lectures and was open to answering questions. |
| The mini, no-stakes pop quiz polls incorporated into the lectures helped keep me engaged and highlighted where my understanding was incomplete. |
| office hrs |
| Dr. Lange explained the content very clearly in the lectures |
| explaining the concepts during lecture |
| PolLEV at the start of class |
| Labs and hw. Never went to lecture but it was fine |
| Probably the in class discussions/work |
| she was very open to questions, and went through the lectures at a great pace—I didnt feel rushed! |

What could the instructor modify to help you learn more?

| Comments |
|---|
| N/A |
| I thought we moved too slowly at first, which then made it feel like later, more important topics were rushed. |
| More practice problems, especially for probability. |
| I think not reading off the slides so much and having much more information of the topics to share with students will provide a deeper understanding of the topics in class and benefit students much more in lectures. |
| Be more specific when explaining things to students with regards to examples of code etc. I feel like we understand it conceptually but it does help to have a hint at what code would be helpful to solve the issue. |
| Nothing really. |
| She could be a bit slower on the coding. |
| The homeworks are quite long and time-consuming, and I wish they had the same deadline as the labs so that we would have the weekend after the lectures to work on it. |
| More practice with functions |
| No barely – maybe earlier office hours or more frequently |
| More descriptive homework questions, possibly writing tests similar to the CS classes so students can know whether they are doing what they are supposed to. |
| The review Jupyter notebook was helpful but I feel like students were expecting the final's difficulty to be similar to the review homework. Maybe a more difficult review homework would prepare students better for the final |
| N/A |
| More practice with stats |
| idk |
| NA |
| Nothing |
| Professor did very well in every class; maybe more office hours? |

The Instructor . . .

| | Mean | Median | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | N/A |
|--|------|--------|-------------------|----------|---------|--------|----------------|--------|
| Organized the course clearly. | 4.60 | 5.00 | 0.00% | 0.00% | 0.00% | 40.00% | 60.00% | 0.00% |
| Presented lectures that enhanced your understanding. | 4.37 | 4.50 | 0.00% | 6.67% | 0.00% | 43.33% | 50.00% | 0.00% |
| Facilitated discussions that were engaging and useful. | 4.23 | 4.50 | 0.00% | 6.67% | 10.00% | 26.67% | 43.33% | 13.33% |
| Stimulated your interest in the core ideas of the course. | 4.47 | 5.00 | 0.00% | 3.33% | 3.33% | 36.67% | 56.67% | 0.00% |
| Challenged you to learn. | 4.50 | 5.00 | 0.00% | 0.00% | 3.33% | 43.33% | 53.33% | 0.00% |
| Helped you gain significant learning from the course content. | 4.50 | 5.00 | 0.00% | 3.33% | 3.33% | 33.33% | 60.00% | 0.00% |
| Was available and helpful outside of class. | 4.72 | 5.00 | 0.00% | 0.00% | 3.33% | 20.00% | 73.33% | 3.33% |
| Motivated you to think independently. | 4.52 | 5.00 | 0.00% | 0.00% | 3.33% | 40.00% | 53.33% | 3.33% |
| Worked to create an inclusive and welcoming learning environment. | 4.66 | 5.00 | 0.00% | 0.00% | 0.00% | 33.33% | 63.33% | 3.33% |
| Overall, this instructor made a significant contribution to your learning. | 4.53 | 5.00 | 0.00% | 3.33% | 3.33% | 30.00% | 63.33% | 0.00% |

Please include the name of the TA/CA/Intern you are evaluating. What aspects of the TA's teaching contributed most to your learning? What could the TA modify to help you learn more? Please include any additional feedback for the TA/CA/Intern.

| Comments |
|---|
| . |
| Jihee. Very helpful but weird place and time to host office hours. |
| PLEASE CAN WE MEET MORE EARLIER IN THE WEEK – and also meet in the afternoon not during class time as was very frustrating some could have been more efficient in only allowing one question per person MORE OFFICE HOURS |
| Anna created a great work environment which helped a lot of students with their questions. |

The TA/CA or Intern. . .

| | Mean | Median | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | N/A |
|--|------|--------|-------------------|----------|---------|--------|----------------|--------|
| Facilitated discussions that supported your learning. | 4.50 | 4.50 | 0.00% | 0.00% | 0.00% | 40.00% | 40.00% | 20.00% |
| Gave you useful feedback on your work. | 4.40 | 4.00 | 0.00% | 0.00% | 0.00% | 60.00% | 40.00% | 0.00% |
| Stimulated your interest in the core ideas of the class. | 4.50 | 4.50 | 0.00% | 0.00% | 0.00% | 50.00% | 50.00% | 0.00% |
| Challenged you to learn. | 4.80 | 5.00 | 0.00% | 0.00% | 0.00% | 20.00% | 80.00% | 0.00% |
| Helped you succeed in the class. | 4.75 | 5.00 | 0.00% | 0.00% | 0.00% | 25.00% | 75.00% | 0.00% |
| Was available and helpful outside of class. | 4.60 | 5.00 | 0.00% | 0.00% | 0.00% | 40.00% | 60.00% | 0.00% |
| Overall, this individual made a significant contribution to your learning. | 4.75 | 5.00 | 0.00% | 0.00% | 0.00% | 25.00% | 75.00% | 0.00% |

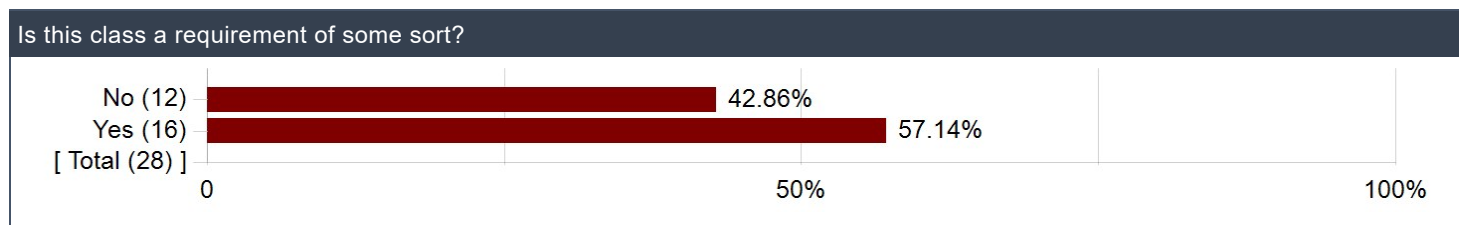
How much did the following elements of the course contribute to your learning gains?

| | Mean | Median | No Gain | A Little Gain | Moderate Gain | Good Gain | Great Gain | N/A |
|-----------------------|------|--------|---------|---------------|---------------|-----------|------------|---------|
| Laboratory Experience | 4.33 | 4.50 | 0.00% | 0.00% | 16.67% | 33.33% | 50.00% | 0.00% |
| Field Trips | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% |
| Library Sessions | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% |
| Review Sessions | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% |
| Writing Seminars | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% |

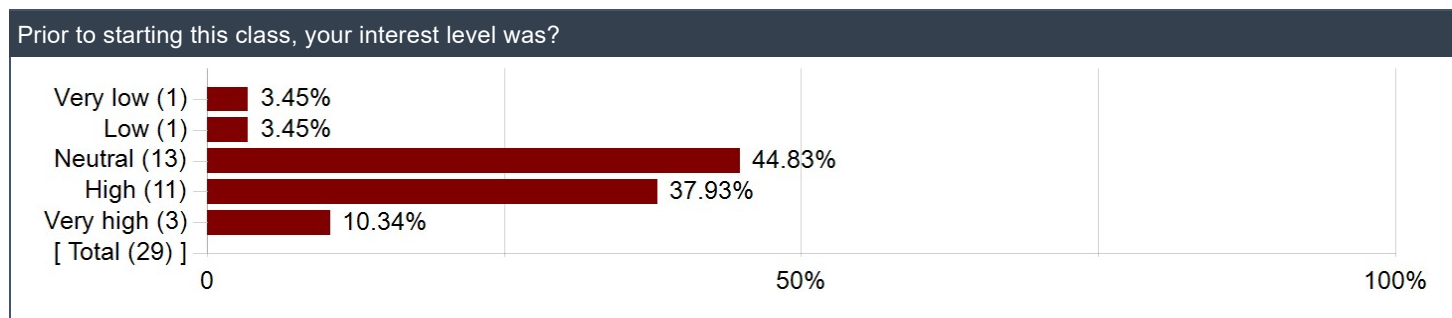
Other course elements not mentioned above:

| Comments |
|---|
| Optional labs that were very helpful to get a better grasp of things presented in lectures and not fully covered in homework. |

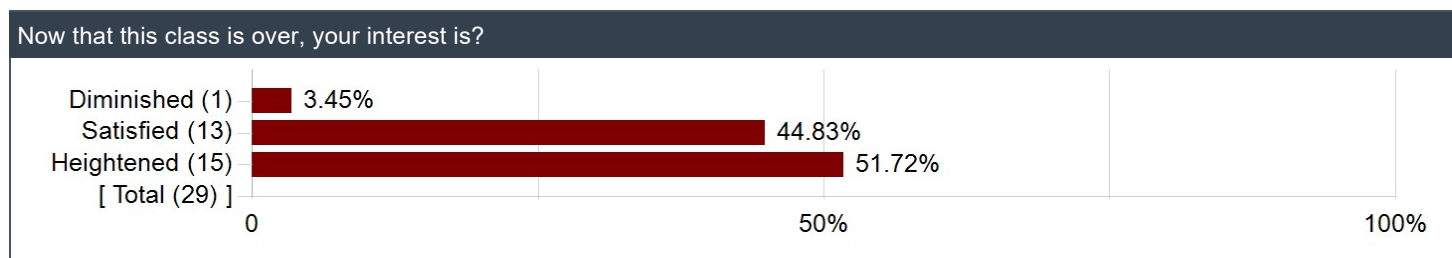
Is this class a requirement of some sort?



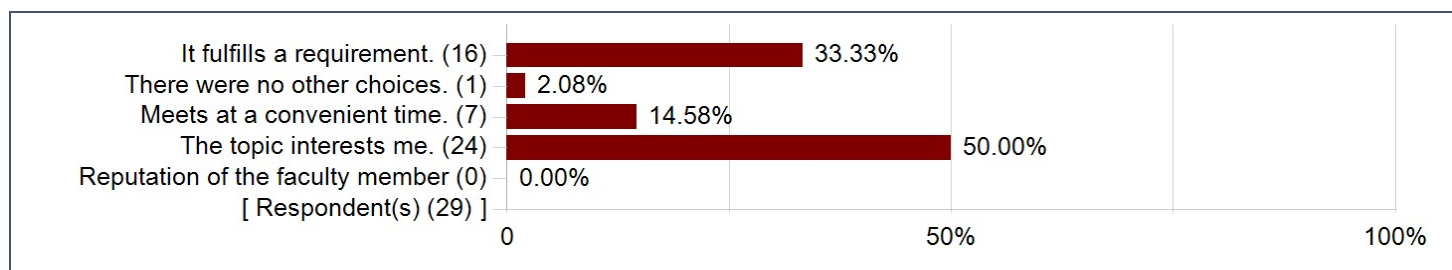
Prior to starting this class, your interest level was?



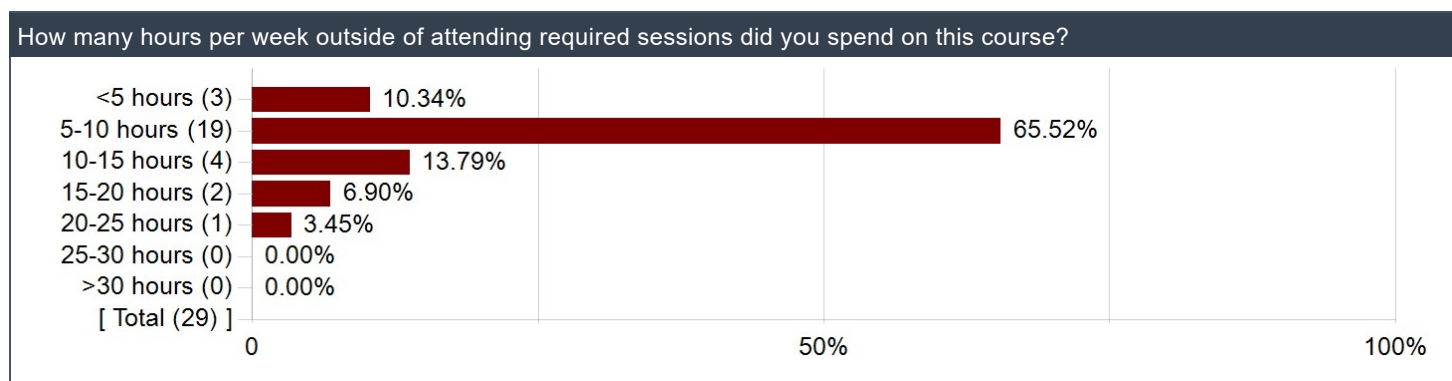
Now that this class is over, your interest is?



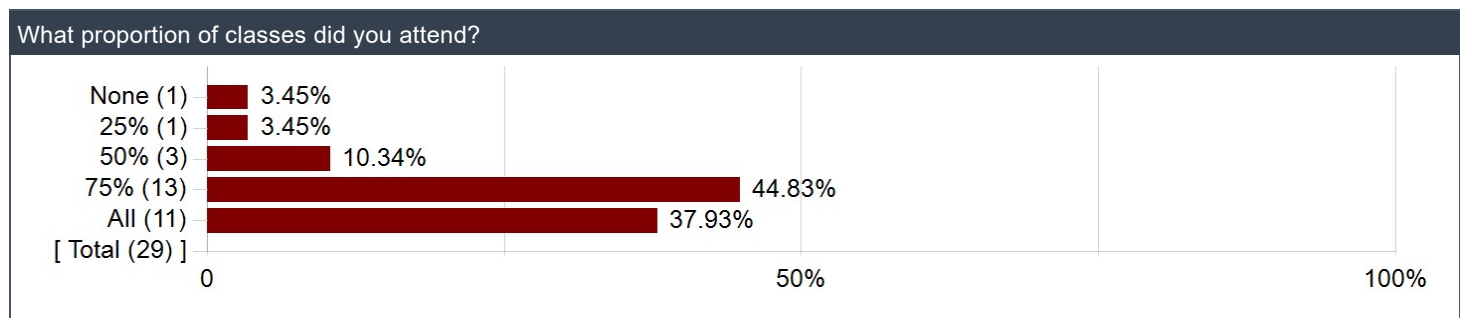
Why did you choose to take this course? (Select all that apply)



How many hours per week outside of attending required sessions did you spend on this course?



What proportion of classes did you attend?



Please comment on the level of difficulty of the course relative to your background and experience.

| Comments |
|--|
| I had no experience and some of the homeworks were difficult, but the TA office hours and EDdiscussion were always there and very helpful |
| As someone who had never coded before, some of the homeworks, especially in earlier weeks, could be fairly challenging and required a lot of time in office hours. It's a steep learning curve initially but I think towards the end of the quarter you learn a lot and feel much more prepared. |
| Very difficult without prior experience |
| Coming in with no coding experience, I felt that I was learning at a reasonable pace. Between the lectures and the homework and the labs I never felt that I was falling behind, and the workload was never all that severe. Being a humanities major, I often found myself doing work for this class to procrastinate on my readings and essays in my other classes... I highly recommend taking this combined with AP Stats credit or another class over calculus if you are a humanities major. |
| Adequately difficult. |
| I had no experience before this class. If you stay on top of things and refrain from relying too strongly on others, there is enough material to keep you on a good pace for success |
| Was challenging, but if you work hard and enjoy it, it is rewarding |
| Very easy if you know how to code. Challenging but manageable if you don't. I encourage anyone to take it! |
| This class is difficult if you have no coding experience. |
| Difficult for those who have no prior experience in statistics or Python. Expect to spend a lot of time wrapping your head around things if you (like me) are not very quick in picking up new topics and require lots of practice and explanation. |
| Very hard to get an A – not sure where I am with final |
| Background up to CMSC 14300 was extremely helpful. I'd recommend taking 14100 or 14200 before this course. |
| Having prior programming experience in Python was very helpful. It would be much more difficult if someone did not have this experience when completing assignments. That being said, it is very possible to learn with the class, though the basics are introduced quickly and are challenging for many. |
| I did not have any background with python before this course and I believe it was difficult but manageable if you have no experience. |
| I had no experience with Python, nor really any instruction on the mathematics of probability. I found this course generally well-structured to teach students new to Python like me though I did find the statistics portion of the class somewhat challenging. |
| no background experience in coding. that wasnt easy but i had experience with stats |
| I had no experience with Python at all, and I found this course manageable. The first few weeks were a little tough, but once I gained some familiarity with Python, it became much easier. |
| No prior background in coding or data science. Was definitely manageable |
| Found this a little tougher than I was expecting. I'll be more ready for Data 2 next quarter. |
| Very easy compared to CMSC 141 and after taking stat 234. There was very little statistics rigor and was mainly about how to use pandas and numpy. |
| I had very little coding experience, and I think it was a reasonable challenge. definitely do-able |