Course Syllabus

Course Information

Registrar Information

Course #	CS M146
Course title	Introduction to Machine Learning
Instructor	**Aditya Grover (https://aditya-grover.github.io/)**
Class time	Mondays and Wednesdays, 2-3:50PM
Class Location	Franz 1260
Course units	4.0
Mid term	May 8 (Monday), 2-3:50PM, In-class
Final exam	June 14 (Wednesday), 11:30AM - 2:30PM, Location TBD by registrar

Course Materials

No required textbook.

Reference Course Notes (optional): machine_learning_notes__cs229_.pdf (https://bruinlearn.ucla.edu/courses/129706/files/8966093?wrap=1) (https://bruinlearn.ucla.edu/courses/129706/files/8966093/download?download_frd=1)

These notes (courtesy: Andrew Ng) have significant overlap with the lectures but they are by no means comprehensive with content covered in the lectures. That is, we will cover content not referred in these notes, and similarly, the notes contain a lot of content that will not be covered in the lectures (which you can skip as well). Also, these notes may use different notations and terminologies than the ones used in class.

Grading Policy

30% -- 4 Homeworks (7.5% each)

70% -- max(30%midterm+40%final, 70%final)

In other words, you can make up for a bad midterm by doing a great final.

Homeworks

- There will be a total of 4 graded homeworks (excluding HW0) released at a rough frequency of 2 weeks.
- The homeworks will involve a mix of questions: short answer, long answer, and a programming assignment.
- All homework submissions will be on **Gradescope (https://bruinlearn.ucla.edu/courses/160780/external_tools/408)** .
- You are highly encouraged to use latex for your homeworks. We have provided an optional template here.
- Each student will be given a total of 4 late days with zero penalty for this course. You can split the 4 late days across the 4 homeworks as you wish. Each extra late day after you have exhausted the 4 late days will be penalized at 25% of the total grade for that particular homework. Late days are counted by rounding off your late time to whole days, i.e., if you submit anywhere between 1 min to 24 hours beyond the deadline, then that counts as 1 full late day.

Midterm

- **Time/Venue:** The midterm exam will take place in class on **May 8** (Monday). Please reach on time.
- **Syllabus**: all topics until and including Lecture 9. This includes Lecture slides (1-9), HWs (1,2), and discussions (weeks 1-5).
- You are allowed to bring **one A4/US letter sized sheet** (i.e., two sides) of notes. It can be printed or handwritten.
- There will be no makeup midterm for those who skip it (any reason). If you skip it, your final exam score will substitute for your midterm score, as reflected in the grading policy.
- In case you haven't noticed, we strive to make immediate updates to the slides whenever we notice any kind of typo. Please download the latest version of slides during your exam prep. And let us know if you spot any typos!

Final

- **Time/Venue:** The final exam will take place on **June 14** (Wednesday) from 11:30am - 2:30pm. Location TBD. Please reach on time.
- **Syllabus**: Everything covered in the lectures, homeworks, and discussions (weeks 1-5).
- You are allowed to bring **two A4/US letter sized sheet** (i.e., four sides) of notes. It can be printed or handwritten.
- In case you haven't noticed, we strive to make immediate updates to the slides whenever we notice any kind of typo. Please download the latest version of slides during your exam prep. And let us know if you spot any typos!

Course Schedule/Outline

Week 1	Introduction, Linear Regression - HW0 released
Week 2	Bias and Variance Tradeoff, Perceptrons - HW1 released

Week 3	Logistic Regression, Decision Trees
Week 4	k-nearest neighbors, Kernel Methods - HW2 released
Week 5	Support Vector Machines
Week 6	Midterm, Ensemble Methods - HW3 released
Week 7	Neural Networks and Deep Learning
Week 8	Deep Generative Models - HW4 released
Week 9	Clustering, Dimensionality Reduction
Week 10	Deep Unsupervised Learning, Transfer Learning

Course Policies, University Policies, and Support for Students

Academic Integrity

UCLA is a community of scholars. In this community, all members including faculty, staff and students alike are responsible for maintaining standards of academic honesty. As a student and member of the University community, you are here to get an education and are, therefore, expected to demonstrate integrity in your academic endeavors. You are evaluated on your own merits. Cheating, plagiarism, collaborative work, multiple submissions without the permission of the professor, or other kinds of academic dishonesty are considered unacceptable behavior and will result in formal disciplinary proceedings usually resulting in suspension or dismissal. See the **Dean of Students website (https://deanofstudents.ucla.edu/)** . for more information.

[source: Dean of Students syllabus statement (**syllabus (https://deanofstudents.ucla.edu/file/4b995724-f033-476a-bccc-f6103528d959)**)]

Accommodations for Students with Disabilities

If you are already registered with the Center for Accessible Education (CAE), please request your Letter of Accommodation in the Student Portal. If you are seeking registration with the CAE, please submit your request for accommodations via the CAE website. Students with disabilities requiring academic accommodations should submit their request for accommodations as soon as possible, as it may take up to two weeks to review the request. For more information, please visit the **CAE website (https://cae.ucla.edu)** , visit the CAE at A255 Murphy Hall, or contact us by phone at (310) 825-1501.

[source: Center for Accessible Education (**Faculty Questions (https://cae.ucla.edu/faculty/faqs)**)]

Resources for Students

UCLA provides resources if you are feeling overwhelmed and need personal and/or academic assistance.

Please see the **Red Folder (https://studentincrisis.ucla.edu/file/39679e1c-a57d-48d0-83a2-a906c1e53669)** for more information.

Title IX

Advocacy and Confidential Services:

Please note that Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the CARE Advocacy Office for Sexual and Gender-Based Violence, 205 Covel Commons, Los Angeles, CA, 90095, care@careprogram.ucla.edu, (310) 206-246 5. Counseling and Psychological Services (CAPS) provides confidential counseling to all students and can be reached 24/7 at (310) 825-0768.

Reporting and Non-confidential Services:

Your professor is required under the UC Policy on Sexual Violence and Sexual Harassment to inform the Title IX Coordinator should he become aware that you or any other student has experienced sexual violence or sexual harassment. In addition, You can also report sexual violence or sexual harassment directly to the University's Title IX Coordinator, 2255 Murphy Hall, titleix@equity.ucla.edu , (310) 206-3417. Reports to law enforcement can be made to UCPD at (310) 825-1491.