

Machine Learning

Spring 2024



Course Logistics and Information

Basic information

Course website:

<http://svivek.com/teaching/machine-learning>

Discussion forum: Canvas (link on course website)

All of you should have access to Canvas by now

The class will be offered in person for the semester

Also available live on zoom if you need it

See canvas for the zoom link

Lecture recordings will be posted on YouTube after the class

Details on the class website

Canvas for announcements, and managing submissions and grades

Try to attend the class live rather than watch the video afterwards

Makes sure that you don't miss anything and gives you the chance to clarify things

People and meetings

Lectures: Tue, Thu 12:25 – 1:45 PM

Instructor: Vivek Srikumar

- Office: 3126 MEB
- Office hours: Tue 2:00 PM

Teaching assistants

- Joe Davison
- Gurunath Parasaram
- Zhichao Xu
- Yuan Zhuang
- Shashank Balija

URLs for all these meetings available on Canvas. *See announcement.*

TA office hours will be finalized soon

Class participation *strongly* encouraged

Participating in class aids understanding

- Especially the complex material we will cover over the semester

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Ways to participate in class

- In person: As usual. Ask and answer questions
- Zoom: If you have any questions or comments:
 - *Either:* Type it in chat and we will respond in chat or in the lecture
 - *Or:* Just type “[I have a question](#)” in chat, or use the “raise hand” feature in zoom. One of us will call you, you can unmute yourself and ask the question
- Other ideas? We are open to new suggestions. Feel free to contact us via Canvas

Communication with staff

Use the discussion board and Canvas as primary forms of communication

- Except, of course, for confidential/personal stuff
- Email turnaround time may be longer. **Please prefix any emails with the class number!**

Look for announcements on Canvas

How will you learn?

See details on class website

Pre-requisites

- Basic probability theory and statistics
- Linear algebra
- CS skills to be able to reason about algorithms and implement them

No required text book, class is self contained

- Any required material will be made available
- Lectures will be posted on class website
- A growing collection of resources (linear algebra, probability) on the website

Grading

Assignments	65%
Midterm exam	10%
Final exam	10%
Project	15%

Grad students will have more work for assignments, and curved separately from undergrads

Homeworks

See details on class website

- 6-7 homeworks in all. Roughly one every two weeks
 - Graduate students may have extra questions
- May involve a programming component
 - Your code must run on the CADE machines
 - We strongly prefer Python (but will allow a small set of other languages at my discretion)
- **Only** digital submissions on Canvas will be accepted
- **Late policy**
 - Assignments accepted up to 24 hours after deadline with a 10% penalty
 - i.e a 90 will become $90 - 9 = 81$
 - Will not be accepted after that

Projects

See details on class website

- **Goal:** To show (yourself, me and everyone) what you have learned
 - Use ideas you see in the lectures and homeworks, make it interesting both to you and me
- **Competitive project:** Work **individually** on a dataset that we provide, common leaderboard on Kaggle
- Several milestones for projects
 - See class website for more information
 - Important milestone coming up (Feb 2): Project information due

Class policies

Please go over the syllabus on the website

Class policies

See details on class website

- **School of Computing policies**
 - This class operates under the school of computing and the college of engineering policies
- **Collaboration and cheating**
 - Collaboration is strongly encouraged, cheating will not be tolerated
 - The School of Computing policy on academic misconduct. See link on the website
 - Acknowledge sources and discussions
 - **Your submissions (homeworks, text, code, proofs, etc) should be your own.**
 - **Group submissions not allowed.**

Class policies

See details on class website

- **Accessibility and accommodation**
 - If you need any assistance, please contact me as soon as possible
 - Will process via the university's Center for Disability and Access
 - <https://disability.utah.edu>
- **Additional policies and information on class website**
 - Safety: <https://safeu.utah.edu>
 - No harassment/discrimination on any basis
 - Wellness and health consultation: <https://wellness.utah.edu>

Who are you?

- Class survey will be available on Canvas
- You can answer it or any part of it if you want
- **Goal:** To help me design the lectures for you

Announcements

- Homework 0 should be available on canvas now
 - Due in one week
 - For you to refresh your memory about prerequisites
- **The class is oversubscribed.** If you are unable to register for the class, please attend the first couple of lectures as if you were registered
 - Several students on the waiting list. As space opens up, I will give out permission codes if you aren't able to register by yourself.
- Please fill up the survey on canvas