



CS 329P : Practical Machine Learning (2021 Fall)

0. Logistics

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<https://c.d2l.ai/stanford-cs329p>

Goals



- Machine Learning topics that matter but are often skipped
 - **Data**: collection, preprocessing, features, dataset shift, non-IID data
 - **Model training**: model selection, model tuning, transfer learning, distillation, multimodality, scalability
 - **Deployment**: efficiency, serving, fairness
- This is a practical course: write code (in Python)
- Project: practical ML research in a team (this way you'll use the techniques for real)

Course



- Time: Wed and Fri 9:45 -11:15 AM
- Slides and notebooks at <https://c.d2l.ai/stanford-cs329p>
- Discussion: piazza.com/stanford/fall2021/cs329p code: p932sc
- Videos on Youtube in 1-2 weeks after class
(we need to record without students to comply with FERPA)
- **No textbook** (d2l.ai has some info), more pointers in slides
- Prerequisites: Python, basic statistics and machine learning

Homework



- 4 assignments (**each homework is 10% of the course**)
 - Due in 10/6, 10/20, 11/3, and 11/12
 - Will be posted 2 weeks before the deadline
 - Reference solutions may be based on students' submissions (we will acknowledge the student if we do so)
- You can be late by a total of 2 days for any reason
- 50/50 mix of programming and theory
- Team work (maximum group size is 4)

Exam



- Midterm exam only **(10% of the course but must not fail)**
 - 10/27
 - Open book but not open computer/phone/tablet etc ...
 - Problems will be similar to homework
- Why
 - At least one individual test in person (so you can't outsource the class)
 - No final exam due to projects
 - Helps us to understand what we should change (if anything)

Project



- Centerpiece of the class (**50% of the course**).
- Register a team and a tentative project by **October 1, 2021 (10%)**
- Midterm presentation on **October 15, 2021 (20%)**
You must produce 1 pages documentation. ICML style files.
- Review project with the TAs by **November 3, 2021 (10%)**
TA sign-off counts for **10%** of the course.
- Project presentation on **December 8 and 10, 2021 (20%)**
- Written project report counts **40%**.
6 pages (up to 10 more for references & appendix). ICML style files.

This is a *teamwork* effort.



Have fun, learn stuff