Deep learning class template

If you're interested in using this material for your own course, see below

This course covers the basic building blocks and intuitions behind designing, training, tuning, and monitoring of deep networks. We will cover both the theory of deep learning, as well as hands-on implementation sessions in pytorch. We will also cover a series of application areas of deep networks in: computer vision, sequence modeling in natural language processing, deep reinforcement learning, generative modeling, and adversarial learning. In the homework assignments, we will develop a vision system for a racing simulator, SuperTuxKart, from scratch.

Prerequisites: Python, basic ML background

Textbooks: None

Class overview

All course material: video lectures, slides, notebooks can be found here.

Schedule

Assignments and final project

- homework 1
- homework 2
- homework 3
- homework 4
- homework 5
- final project
- extra credit homework

Collaboration / Academic Honesty Policy

Collaboration is not allowed for homework or Quizzes. Every homework and quiz needs to be solved individually. We will check for duplicates. For the final project groups of up to 3 students are allows. Different groups are allowed to discuss ideas and share data, but no code.

The online course format allows for multiple methods of identity verification, collusion, collaboration and plagiarism monitoring and detection. A violation of the course policy may include (but is not limited to) the following:

- Providing your UT EID to any other person
- Collaborating or sharing information with another person regarding the material on any quiz, assessment or assignment, before, during and/or after any quiz, assessment or assignment
- Recording any quiz, assessment or assignment material in any format
- Failing to properly cite language, ideas, data, or arguments that are not originally yours
- The public (such that it can be viewed by more than one person) posting of any form of a test bank or group of questions from any assignment
- Consulting forbidden materials or sources of information

The University of Texas at Austin Academic Integrity principles call for students to avoid engaging in any form of academic dishonesty on behalf of yourself or another student. Grade-related penalties are routinely assessed (“F” in the course is not uncommon), but students can also be suspended or even permanently expelled from the University for scholastic dishonesty.

If you have any questions about what constitutes academic dishonesty, please refer to the Dean of Students website or contact the instructor for this course.

You must agree to abide by the Honor Code of the University of Texas. You will not work with or collaborate with others in any way while completing any of the graded course assignments.

Late Policy

Quizzes: N/A

Homework:

- 1 day: -20%
- 2 days: -50%
- 3 days: -100%

Final Project:

- 1 day: - 100%

Assignments, Assessment, Evaluation

- Quizzes (10%): 30 quizzes total.

- Homework (60%): There are five homework assignments in this class.
- Final Project (30%): There is one final project in this class.
- Extra credit homework (5%): If you need to make up for missing some homework or quizzes, there is an extra credit homework assignment.

Documented Disability Statement

The University of Texas at Austin guarantees that students with disabilities have access to appropriate accommodations. You may request an accommodation letter from the Division of Diversity and Community Engagement, Services for Students with Disabilities [https://diversity.utexas.edu/disability/].

If you have approved accommodations for the course, please contact us to arrange them. Please do this as soon as possible, so that you can have the benefit of the accommodations throughout the duration of the course.

Course Etiquette

We expect that you will treat online discussions as though you are having a civil, respectful discussion with your fellow classmates in the same classroom. Please refrain from using profanity or any euphemisms for profanity. Please do not bait other commenters or personally attack them. Please do not use sarcasm in a way that can be misinterpreted negatively. And please do not make the same point over and over again. In short, please just respect the right of your colleagues to ask questions and discuss their opinions about the subject matter of our course on the discussion board. Violators of these discussion rules will simply be shut out from all class communications—email, Piazza, and office hours.

Behavior Concerns Advice Line

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individuals behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit https://besafe.utexas.edu/behavior-concerns-advice-line

Course Conent

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- Xingyi Zhou
- Brady Zhou
- Ishan Nigam
- Eddy Hudson
- Dian Chen
- Thanh An Nguyen

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Using this material in your own course

Feel free to build on this course material. We only ask that you attribute us appropriately. For course material:

- If you use an entire slide deck, simply leave the attribution on the first slide
- If you use a single slide, put an attribution somewhere on the slide

For homework:

- Put the original license and attribution somewhere in the starter code.

Getting access to this repo

If you're teaching a similar class and would like to gain raw access to the course material, shoot me an email and I can add you. To make things as easy as possible use the subject `Access to deep learning class repo` and make sure to give me your github id. Please briefly describe why you'd need access including a link to the course you're going to teach. I'd ask you to not share any solutions online and keep the attributions in place.

All material, except for the homework solutions can be directly accessed from this webpage.