Applied Deep Learning

Course Logistics

March 3rd, 2020 **http://adl.miulab.tw**

National Taiwan University

Course Logistics

◉ Instructor: 陳縕儂 Yun-Nung (Vivian) Chen

◉ Time: Tuesday 234, 9:10-12:20

◉ Location: 資102 / Online
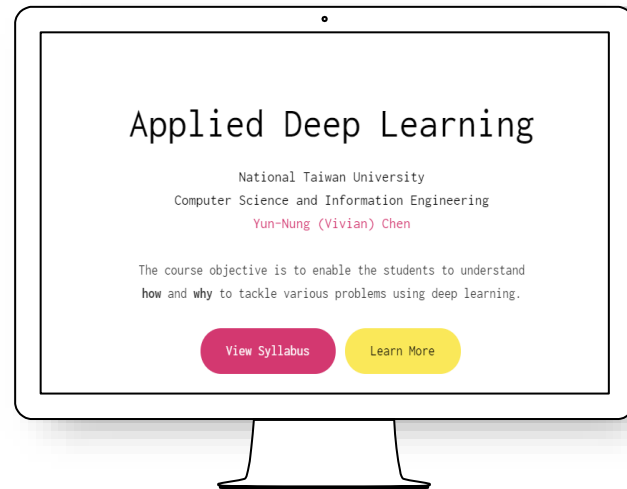

◉ Website: http://adl.miulab.tw

◉ NTU COOL: https://cool.ntu.edu.tw/courses/918/

◉ Email: adl-ta@csie.ntu.edu.tw
   ○ To ensure timely response, email title should contain "[ADL2020]"
   ○ Do NOT send to our personal emails

Always check the up-to-date information from the course website

Applied Deep Learning

National Taiwan University
Computer Science and Information Engineering
Yun-Nung (Vivian) Chen

The course objective is to enable the students to understand
how and **why** to tackle various problems using deep learning.

View Syllabus   Learn More

NTU COOL for Fighting Coronavirus

- ⦿ NTU COOL
  - ○ Lecture videos
    - ■ Comments anytime
  - ○ Assignment submission (還可以寫 code 呢!)
- ⦿ Slido QA
  - ○ #ADL200303
- ⦿ TA Team
  - ○ Forum discussion (preferred)
  - ○ Email QA
  - ○ TA recitation
  - ○ TA hours (physical and online)

National Taiwan University
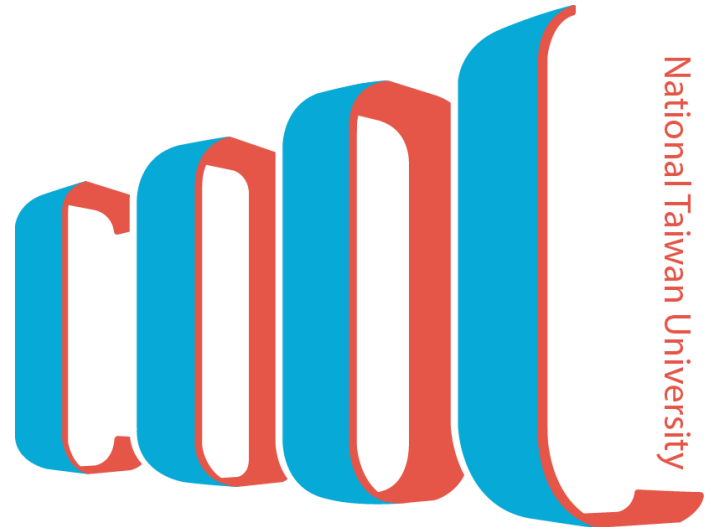
Course Goal

◉ The students are expected to understand
1. how deep learning works
2. how to frame tasks into learning problems
3. how to use toolkits to implement designed models, and
4. when and why specific deep learning techniques work for specific problems

Pre-requisites

◉ Course
  ○ Required: college-level calculus, linear algebra
  ○ Preferred: probability, statistics

◉ Programming
  ○ proficiency in Python; all assignments will be in Python
  ○ GitHub; all assignments will be handed in via GitHub
  ○ Kaggle; all assignments will be submitted to Kaggle

(tutorial from Stanford)   (tutorial)   (website)
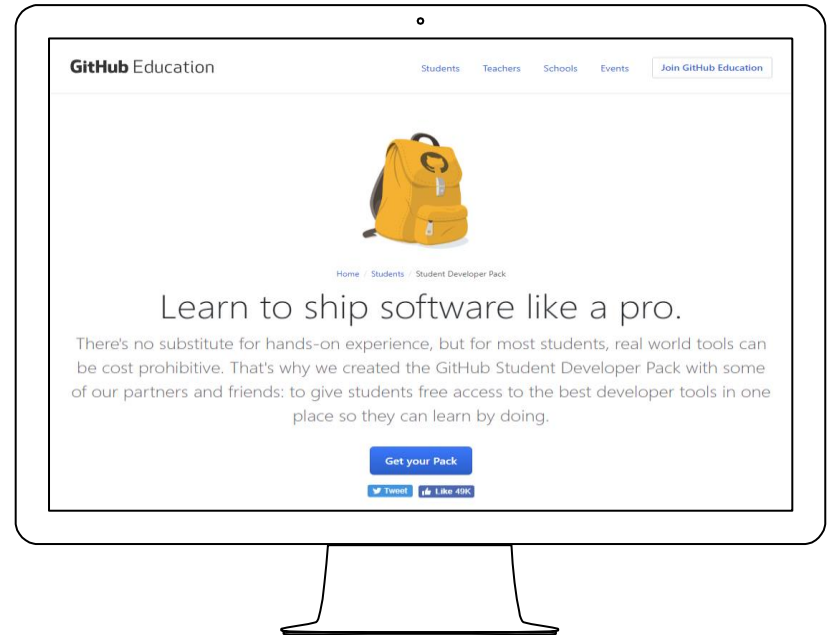
Please consider your available resources for taking this course

GitHub Student Pack

The [student plan](#) provides unlimited private repositories
- make your assignments private before the due date
- make them public afterwards

Grading Policy

- ⦿ 3 Individual Assignment: 20% x 3 = 60%
  - ○ GitHub code w/ README
    - ■ The score is based on coding and the report
    - ■ Bonus points for outstanding performance
    - ■ **Late policy: 25% off per day late afterwards**

- ⦿ Final Group Project: 30%
  - ○ GitHub code, Project document
    - ■ Bonus points for the outstanding work
  - ○ Final presentation (format TBA)

- ⦿ Participation: 10%
  - ○ Forum/slido discussion involvement
  - ○ Write-up for the special events

Understanding the difference between "collaboration" and "academic infraction"

Individual Assignments

A1. Text Summarization

A2. Transformer / BERT

A3. Language Generation

Final Group Project (2~5 persons)

- Choose your preferred project topic
  - Presentation
    - Poster or online presentation
    - Outstanding projects will be selected for awards/prizes
  - Project Report & Code
    - Wrap-up project report
    - GitHub code submission w/ README

The project details will be announced later

How to Get the Registration Code?

◉ Limit: ~100 students per course

◉ Requirements
  ○ Available GPU Resources
 ○ Programming skills
  ○ Finish HW0
  ○ Fill in the Google Form

好想要喔

深度學習及其應用
科目流水號：
加選授權碼：
授課教師：陳縕儂

Tentative Schedule

1	2020/03/03	Course Logistics & Introduction	A0 – Pytorch Tutorial
2	2020/03/10	NN Basics & Backpropagation	
3	2020/03/17	Word Representations + RNN	A1 – Summarization
4	2020/03/24	Attention & Gating Mechanisms	
5	2020/03/31	Word Embeddings + ELMo	
6	2020/04/07	Transformer + BERT	A2 – BERT
7	2020/04/14	More BERT	
8	2020/04/21	RL Intro + Basic Q-Learning	
9	2020/04/28	Policy Gradient + Actor-Critic	A3 – NLG
10	2020/05/05	RL-Based NLG	
11	2020/05/12	Adversarial Training + Generative Models	Final Project
12	2020/05/19	Beyond Supervised Learning	
13	2020/05/26	Advanced Learning Techniques	
14	2020/06/02	Special Topic + Career Discussion	
15	2020/06/09	Buffer Week	
16	2020/06/16	Final Project Presentation	
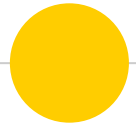
Teaching Assistant Team
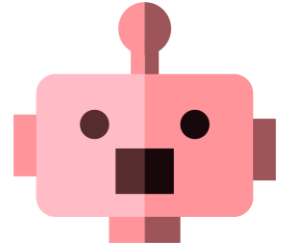
Rules

Asking online questions is encouraged!!

Any comment or feedback is preferred!!
(speed, style, etc)

Attending TA hours!! (details TBA)

Thanks!

Any *questions* *?*

You can find the course information at

- http://adl.miulab.tw
- adl-ta@csie.ntu.edu.tw
- YouTube: Vivian NTU MiuLab