Course Introduction – Understanding of AI

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Syllabus

- Instructor: Prof. Yongjae Yoo
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- Class schedule: Term 1 – 22 Jul to 2 Aug, 9:00-12:00, 13:00 – 14:30
  - Typically,
  - Morning – Lectures
  - Afternoon – Exercises
- Textbook: Lecture Slides
- Course language: English.

Syllabus

- Topics to be covered:
  - What is AI? Concepts and Myths
  - Basic mathematics, coding, and computing backgrounds
  - Traditional and current AI trends
  - Use of current tools and understanding “how they work”

  - Practice the AI covered in the class on the machine.

Tentative Plan

- 10-day schedule of the course

Day	1st	2nd	3rd	Day	1st	2nd	3rd
7/22	Intro – What is AI?		Environment Setup	7/29	Intro – Neural network, Deep learning, and AI Models		Build your own data
7/23	Primer – Math and Basics to “communicate” with your AI		“Hello world” AI!	7/30	Probability and Probability-based Learning		Chaining probabilities
7/24	How computer understand, think, and take actions?		Algorithm primer	7/31	Hyperparameters, Training, Test, and Evaluation – Concepts on AI models		
7/25	(Online video class) Classifier and Regression			8/1	Data and Feature Engineering - Preprocessing		Select your own AI model
7/26	(Starts on 10am) Exercises – Classifier, Regression			8/2	Applications of AI Models	Run your own AI model, Intro to Google Course	

Evaluation

- Attendance: 10%
- In-class Exercise: 60%
- Final report: 30%

- Given that we have an intensive two-week schedule,
  - Afternoon classes consist of in-class exercise session.
  - You'll be asked to submit a final report on Aug 2nd.

Attendance

- 10% of total score
- 0 absence: 10%
- 1, 2, 3, … absences: 8, 6, 4 % …
  (2% deduction for each absence (day-wise))
- 4+ absences: F (University attendance rule)

In-class Exercise

- 60% of total score
- Coverage: Contents of each class in the morning lectures.
- Just “show off” what you’ve done.
  - For those who are successful, additional material will be given.
  - (not mandatory, no scoring but used for the excellence award.)

Final Report

- 30% of total score
- Up to 10 pages, including figures/tables
- Deadline: Aug 2nd, 23:59:59 PM KST (GMT+9).

- Topic: Choose one from below
  - 1. Apply an AI model on your venue's data, and draw conclusions from the results.
  - 2. Foresee the future about the AI's impact in your venue – free form essay.

- You can finalize on the final day exercise session.
- Should you have any question, please contact the instructor.

Academic Integrity

- Any copy, pirating, or cheating results in an F in final score and be reported to the University academic integrity (ethics) board.

- Open-source code policy: those who want to use open-source code in the team project must clarify the source. i.e., “where did you get.”

Disclaimer

- The class will not cover “major-level” depth theories.
- You will just “sip and bite” the elementary part only.

- Those who are taking this course should be able to use their own computing environments.
  - Own laptop, tablet + server connection, etc.
  - On the first day, you’ll be asked to finish setup.

Questions?