Artificial Intelligence: Principle and Practice

Free 8-day workshop bringing you to the cutting-edge of artificial intelligence theory and technique!

This completely free workshop is intended to give undergraduate and graduate students from all science and engineering majors a fast introduction to modern artificial intelligence theory and technique with special emphasis on machine learning.

It will be held in 80-minute online sessions twice a week over 8 days of October. To accomadate varied schedules, sessions will be held on:

- Mondays and Wednesdays (12:30 - 1:50pm)
- Tuesdays and Thursdays (12:30 - 1:50pm)
- Saturdays (2:00 - 3:20pm and 3:30 - 4:50pm)

All times listed in Central time. Day 1: **Sat. Oct. 2 / Mon. Oct. 4 / Tue. Oct. 5 2021**

Website: https://tinyurl.com/ai-principle-and-practice

We will study:

- 'Classical' AI shortcomings and modern symbolic progressing techniques
- Machine learning fundamentals, neural networks, and deep learning
- Computer vision, sequence modeling, natural language processing, deep graph processing
- Reinforcement learning, multi-agent RL, self-supervised learning, transfer learning, and domain generalization
- MLops, AI safety, and ethics

We will use:

- Python

- `NumPy`, `Pandas`, `Matplotlib`
- `TensorFlow`, `Keras`, `transformers`
- OpenAI `gym`, `PettingZoo`, `ThreeDWorld`
- `tensorboard`, `wandb`, docker, and the Google Cloud Platform

Before signing up, you should already be able to calculate basic derivatives, apply probability & statistics to toy problems, and write simple Python programs.

If your neurons have accumulated sufficient presynaptic evidence and your reward estimator feels like it's ready to explode, please join this exciting workshop!

ps: (Much of this document was drafted by a language generation model.)