Artificial Intelligence: Principle and Practice

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

Mon/Wed, Tue/Thur, and Sat/Sun sessions held online.
Lecture (12:30 - 1:00pm): interactive undergraduate-style lecture
Lab (1:10 - 1:50pm): hands-on engineering experience
Deep Dive (2:00 - 3:20pm. Mon/Wed section only): graduate-style paper and peer-focused discussion

Day 1: **Oct. 4 / Oct. 5 / Oct 9, 2021**

We will study:

- 'Classical' AI
- Symbolic techniques
- Machine learning
- Neural networks and deep learning
- Computer vision
- Sequence modeling
- Natural language processing
- Reinforcement learning (including multi-agent RL)
- Human-level artificial intelligence
- AI safety and ethics

We will use:

- Python
- NumPy, Pandas, Matplotlib
- TensorFlow, Keras, Huggingface

- OpenAI Gym, PettingZoo, ThreeDWorld
- tensorboard, wandb
- docker, Google Cloud Platform

Students should already be able to:

- calculate the derivative of a polynomial
- apply basic probability & statistics to toy problems
- write simple Python programs

Course expectations:

❌ no homework
❌ no tests
❌ no costs (this course is free)
⚠️ **This course is not accredited by UTA**
✅ individualized activities
✅ machine learning
✅ (most importantly) human learning

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

Project page: tinyurl.com/ai-principles-and-practice

ps: (Much of this document was drafted using artificial intelligence.)