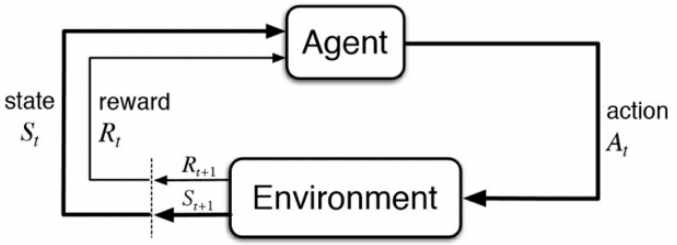

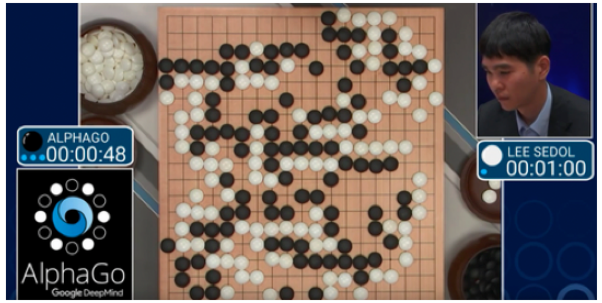

IERG 5350
Reinforcement Learning

Overview on Course Project

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The Chinese University of Hong Kong

Overview

- 2 students work in a group, on a RL-relevant project
- Finding team-mates: https://piazza.com/class/keno9y4365j64r
- Deliverables:
  - Project proposal (by the end of week 3)
  - Mid-term report (week 9): report contains literature review, problem formulation, initial result
  - Github repo (commits, readme, polished code)
  - Course report: LaTex template: https://github.com/cuhkrlcourse/RLexample/tree/master/project_template
  - Final presentation (week 14-15) : recorded video, final report, peer-review
  - Final report revision: by the end of week 16

Guideline

- Be creative
- Start with something small
- Take into consideration of your resources:

In-house GPUs, CPUs, Google Colab, Amazon AWS?

Goal	More Challenging Goal
Gain a hands-on experience of RL algorithms and libraries	Able to apply RL to a research problem or improve RL methods

Project Proposal

Key elements:

- Identify the problem and why it is interesting
- Which environment you will use, which RL agent you think might work
- Key reference or most relevant work
- 2-page proposal in Latex Template: https://github.com/cuhkrlcourse/RLexample/tree/master/project_template
- Email to: cuhkrlcourse@googlegroups.com, with title: 2020-21fall-proposal-withyourname

Project Proposal Structure

- Problem Definition
- Related Work
- Environment and Data
- Proposed Approach
- Possible Experiments
- *Some Initial Results

Where to get the project ideas

- Your own project!
- OpenAI blog: https://blog.openai.com/
- OpenAI fellow project summary: https://blog.openai.com/openai-summer-fellows-2018/
- DeepMind blog: https://deepmind.com/blog/
- Uber AI blog: https://eng.uber.com/
- Facebook AI Research:
- Many great researchers:
  - David Ha: http://blog.otoro.net/

Educational Tool of RL

https://blog.openai.com/spinning-up-in-deep-rl/

We're releasing Spinning Up in Deep RL, an educational resource designed to let anyone learn to become a skilled practitioner in deep reinforcement learning. Spinning Up consists of crystal-clear examples of RL code, educational exercises, documentation, and tutorials.

Previous year’s course projects

https://cuhkrlcourse.github.io/2019spring/project.html