

CPSC 533V Learning to Move Jan-Apr 2020

Project (35%)

The goal of the project is to investigate a particular topic or research direction in further depth. You are free to work in groups of 2-3 if you like. The project consists of:

1. A one or two page project proposal (PDF), due by midnight on **Thu Mar 19, 2020**, submitted via email to van@cs.ubc.ca. This will be worth 25% of the project grade. Please feel free to discuss your ideas with me in advance of the proposal submission.
2. A project report (PDF) is due on **Fri Apr 17, 2020**.

In your project proposal, include: the motivation for the project, the goals, a list of intermediate steps, one or two of most relevant papers, and an honest assessment of the biggest unknowns or risks associated with the project. If working in a group, provide a breakdown of who is likely to work on what. Structure your project in a way that will allow you to declare success even if you run into a problem or you run out of time -- this is the purpose of listing the intermediate steps. Restrict the scope of your project to something reasonable, given the limited time. Think of it as Assignment 6.

Possible types of projects include:

- Exploring and implementing RL methods on a problem of interest to you. I recommend beginning with simplified versions of the problem in order to speed design-and-debug iteration. You can build on your assignment code, or using other code bases.
- Write a review summary of recent work in a particular research direction. This may typically involve reading 3 papers and understanding their connections with each other and with common RL methods. Provide a balanced evaluation and critique of the work in the area.
- Exploring algorithms or algorithmic issues, including hyperparameters and learning stability, reproducibility, task and reward structure, environment/creature structure, and more. You can build on your assignment code, or using other code bases.

The project report can be in a format of your choosing, and need not be overly long. As applicable, document the problem you are solving, the method, the results, and, importantly, the key insights you have gained, along with possible future directions.