INF8953DE(Fall 2021): Reinforcement Learning Given on: Oct 29, 6:00 pm

Assignment #3: Policy Gradient Methods

• This is an individual assignment. However, you are allowed to discuss the problems with other students in the class. But you should write your own code and report.

Due on: Nov 19, 10:00 pm

- If you have any discussion with others, you should acknowledge the discussion in your answers by mentioning their name.
- This assignment is provided in the Colab notebook, here: Colab
- Submit the completed Colab/Jupyter notebook (.pynb file) on **Moodle**.
- For this assignment, it is sufficient to submit of pdf of your final notebook with answers on Gradescope. No need to make a separate report.
- Be precise with your explanations in the report. Unnecessary verbosity will be penalized.
- You are free to use libraries with general utilities, such as matplotlib, numpy and scipy for python. However, you should implement the algorithms yourself.
- If you have questions regarding the assignment, you can ask for clarifications in Piazza. You should use the corresponding tag for this assignment.
- Instructions on how to properly convert your jupyter notebook to pdf can be found here: https://courses.cs.duke.edu/fall18/compsci371d/homework/workflow.html.
- Instructions on how to submit the report in pdf on the Gradescope can be found here: https://www.youtube.com/watch?v=u-pK4GzpId0

Colab Notebook

The *questions* and the *skeleton code* for this assignment with necessary dependencies and utilities are provided in the collab project here, Colab. Make a copy of this notebook and insert your code and answer in appropriate placeholders.

There are placeholders for different policy gradient methods to be coded. You should fill these placeholders with the correct code for the question asked, execute the code, and display results. Also, add necessary explanations in text for the questions if asked.

All the Best!