CSCI 2951 Assignment Instructions

After you have downloaded the assignment file(s). Follow the instructions.

1. Setup and install Python 3. Versions of Python 3.9.18 or above required. Our assignments will not have any complex dependencies. We expect that you have installed matplotlib and numpy. Please let us know if you have any questions about installing these packages.
2. Further install gymnasium and pygame packages. Pygame version 2.5.2 and version 0.29.1 of gymnasium work as expected and we have tested those out. Higher versions should be okay.
3. Install the deep learning Python library PyTorch. You shouldn't need the GPU version of the library, so go ahead and install the CPU version.
4. Install JupyterLab or Jupter notebook. We recommend JupyterLab but the *.ipynb file should be compatible with the Jupyter notebook if you already have it installed.
5. Launch Jupyter lab and complete the assignment. The *.ipynb file is included. All the necessary files are in the same folder. The import statements are also in the *.ipynb file. **Please do not make changes to the import statements**.
6. Write all your answers to the questions **requiring a written answer in a separate document** which is to be submitted as a pdf. These are marked GRADED in the text blocks of the notebook. Please ensure that the numbers of questions match those in the notebook. Submit this under 'Written Assignment 4' on gradescope. Sample layout doc is provided here.
7. Submit only the .py file to the autograder for the programming part. **Remember to save all your changes.** After finishing the assignment, export the *.py file from the Jupyter notebook by running the following command in the folder containing your Jupyter notebook:
   jupyter nbconvert --to python --RegexRemovePreprocessor.patterns="^%" CSCI2951_F_assignment4.ipynb
   Please ensure that your python file runs as is:
   python CSCI2951_F_assignment4.py
8. Your folder structure should look something like this after running the export command:
   folder_name
   |------ CSCI2951_F_assignment4.ipynb
   |------ CSCI2951_F_assignment4.py
   |------ tools.py
   |------ mdp.py
   |------ pomdp.py
   |------ …

Upload the CSCI2951_F_assignment4.py file to the autograder under "Programming Assignment 4" on gradescope, please stick to this file name (CSCI2951_F_assignment4.py). You don't need any other files.

Note: Please let us know if you run into issues.

Grading:
1. For the written part:
   a. Your submissions will be graded on clarity and correctness.
   b. Please post discussions on Ed or come to office hours if something is unclear.
   c. Submit under Written Assignment 4 on gradescope
2. For the coding part:
   a. Please make sure your exported *.py file runs through tests "as is", meaning it doesn't throw any errors/exceptions and all the functions implemented by you are not broken or require any user input. We score the python file you submit using the auto grader on gradescope. If there are issues importing or running the code it could result in significant overhead for us 🙁🙁.
   b. We check your submission against other secret test cases.
   c. If at any point you are unable to set up the environment or there are issues with the files we have shared with you or gradescope autograder please let us know in a timely manner and seek assistance.
   d. We would like all the code you've written to be contained within the notebook (and the corresponding .py file) so please do not make any changes to the accompanying tools.py, gridworld.py, or mdp.py files. We will run the automated tests against our implementation of the tooling and other libraries/python files.