Project 4

Activity: Project 4

Course: 2023SP ST: Machine Learning (CS-390-02, CS-670-02)

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Implementation	**Level 2/Excellent** 1 point	**Level 1/Average** 0.5 points	**Level 0/Poor** 0 points	**Criterion Score**
Implementation	Includes working implementation of two MDPs and experiments with them.	Includes partial working implementation of two MDPs and experiments on them. Or fully working implementation only present for one MDP.	Implementation is limited in scope or severely flawed. ✔	0 / 1

Criterion Feedback

No execution of the policy iteration or value iteration algorithms are present in your code.

Further, a lot of your code makes no sense. The Heart and Iris datasets have nothing to do with MDPs. You cannot convert a dataset into an MDP this way. I'm not sure how you were creating transition models or reward matrices from the heart data set.

Analysis	**Level 3/Excellent** 3 points	**Level 2/Average** 2 points	**Level 1/Poor** 1 point	**Level 0/Incomplete** 0 points	**Criterion Score**

Analysis	**Level 3/Excellent** 3 points	**Level 2/Average** 2 points	**Level 1/Poor** 1 point	**Level 0/Incomplete** 0 points	**Criterion Score**
Markov Decision Problems	Discussion describes why the two MDPs are interesting. Includes clear description of states, actions, transition model, and rewards. Both MDPs are sized appropriately, as instructed.	Discussion touches on some of why the two MDPs are interesting and appropriately sized. Some discussion of states, actions, transition model, and rewards. OR Meets the standards for a 3 for only one MDP.	Discussion describes the two MDPs, but does not indicate why they are interesting or appropriately sized. Description might include states, actions, transition model, and/or rewards. OR Meets the standards for a 2 for only one MDP.	No discussion of MDPs. OR Meets the standards for a 1 for only one MDP. ✓	0 / 3

Criterion Feedback

You describe 4 different MDPs at various points of this assignment: RobotNavigation, Frozen Lake, Medical Diagnosis, and Blackjack. The parameters of the medical diagnosis MDP vary wildly throughout the analysis.

The fact that the topics keep changing throughout the assignment and that nothing corresponds to your code makes this ungradeable.

Analysis	**Level 3/Excellent** 3 points	**Level 2/Average** 2 points	**Level 1/Poor** 1 point	**Level 0/Incomplete** 0 points	**Criterion Score**
MDP #1	Discusses and compares results of value iteration and policy iteration on MDP #1. Addresses choice of parameters. Addresses how size of problem affects results. Discussed potential effects of modifying states, transition model, or reward structure.	Some discussion and comparison of results between value iteration and policy iteration on MDP #1. Addresses some of choice of parameters, impact of problem size, or potential effects of changing states, transition model, or reward structure. OR Meets the requirements of a 3 but for only one of the two algorithms.	Analysis of results of value iteration and policy iteration are surface level for MDP #1 and do not go beyond basic output. OR Meets the requirements for a 2 but for only one of the two algorithms.	Limited or no discussion of results of MDP #1 OR Meets the requirements for a 1 but for only one of the two algorithms. ✓	0 / 3

Criterion Feedback

Ungradeable

Analysis	**Level 3/Excellent** 3 points	**Level 2/Average** 2 points	**Level 1/Poor** 1 point	**Level 0/Incomplete** 0 points	**Criterion Score**
MDP #2	Discusses and compares results of value iteration and policy iteration on MDP #2. Addresses choice of parameters. Addresses how size of problem affects results. Discussed potential effects of modifying states, transition model, or reward structure.	Some discussion and comparison of results between value iteration and policy iteration on MDP #2. Addresses some of choice of parameters, impact of problem size, or potential effects of changing states, transition model, or reward structure. OR Meets the requirements of a 3 but for only one of the two algorithms.	Analysis of results of value iteration and policy iteration are surface level for MDP #2 and do not go beyond basic output. OR Meets the requirements for a 2 but for only one of the two algorithms.	Limited or no discussion of results of MDP #2 OR Meets the requirements for a 1 but for only one of the two algorithms. ✓	0 / 3

Criterion Feedback

Ungradeable

Total	0 / 10

Overall Score

Level 4/A	Level 3/B	Level 2/C	Level 1/D	Level 0/F ✓