Assignment No. 8 Rubric

EECS 658

Introduction to Machine Learning

Due: 11:59 PM, Thursday, December 8, 2022

**Student: Alex Anderson**

**Student ID: 2991167**

# Point Breakdown

|  |  |  |
| --- | --- | --- |
| ***Graded Value*** | ***Points Possible*** | ***Criteria*** |
|  | 1 | Name of the zip file: FirstnameLastname\_Assignment8 |
|  | 1 | Name of the Assignment folder within the zip file: FirstnameLastname\_Assignment8 |
|  | 1 | Copy of Rubric 8.docx with your name and ID filled out |
|  | 1 | Python source code. |
|  | 2 | Part 1: N(s), S(s), and V(s) arrays printed out for epoch 0 and are correct |
|  | 2 | Part 1: N(s), S(s), and V(s) arrays printed out for epoch 1 and are correct |
|  | 2 | Part 1: N(s), S(s), and V(s) arrays printed out for epoch 10 and are correct |
|  | 3 | Part 1: N(s), S(s), and V(s) arrays printed out for the final epoch and are correct |
|  | 2 | Part 1: Array showing k, s, r, γ, and G(s) for all values of k for epoch 1 printed out and is correct. |
|  | 2 | Part 1: Array showing k, s, r, γ, and G(s) for all values of k for epoch 10 printed out and is correct. |
|  | 3 | Part 1: Array showing k, s, r, γ, and G(s) for all values of k for the final epoch printed out and is correct. |
|  | 2 | Answer to Part 1, Question 1 |
|  | 2 | Part 2: N(s), S(s), and V(s) arrays printed out for epoch 0 and are correct |
|  | 2 | Part 2: N(s), S(s), and V(s) arrays printed out for epoch 1 and are correct |
|  | 2 | Part 2: N(s), S(s), and V(s) arrays printed out for epoch 10 and are correct |
|  | 3 | Part 2: N(s), S(s), and V(s) arrays printed out for the final epoch and are correct |
|  | 2 | Part 2: Array showing k, s, r, γ, and G(s) for all values of k for epoch 1 printed out and is correct. |
|  | 2 | Part 2: Array showing k, s, r, γ, and G(s) for all values of k for epoch 10 printed out and is correct. |
|  | 3 | Part 2: Array showing k, s, r, γ, and G(s) for all values of k for the final epoch printed out and is correct. |
|  | 2 | Answer to Part 2, Question 2 |
|  | 2 | Answer to Part 3, Question 3 |
|  | 3 | Part 3: Array showing the Q-Learning Rewards Matrix (R). |
|  | 2 | Part 3: Array showing Q-Learning Value Matrix (Q) for episode 0 printed out and is correct. |
|  | 2 | Part 3: Array showing Q-Learning Value Matrix (Q) for episode 1 printed out and is correct. |
|  | 2 | Part 3: Array showing Q-Learning Value Matrix (Q) for episode 10 printed out and is correct. |
|  | 3 | Part 3: Array showing Q-Learning Value Matrix (Q) for the final episode printed out and is correct. |
|  | 2 | Answer to Part 3, Question 4 |
|  | 2 | Answer to Part 3, Question 5 |
|  | 3 | Part 4: Array showing the SARSA Rewards Matrix (R). |
|  | 2 | Part 4: Array showing SARSA Value Matrix (Q) for episode 0 printed out and is correct. |
|  | 2 | Part 4: Array showing SARSA Value Matrix (Q) for episode 1 printed out and is correct. |
|  | 2 | Part 4: Array showing SARSA Value Matrix (Q) for episode 10 printed out and is correct. |
|  | 3 | Part 4: Array showing SARSA Value Matrix (Q) for the final episode printed out and is correct. |
|  | 2 | Answer to Part 4, Question 6 |
|  | 2 | Answer to Part 4, Question 7 |
|  | 2 | Answer to Part 4, Question 8 |
|  | 3 | Part 5: Array showing the Decaying Epsilon-Greedy Rewards Matrix (R). |
|  | 2 | Part 5: Array showing Decaying Epsilon-Greedy Value Matrix (Q) for episode 0 printed out and is correct. |
|  | 2 | Part 5: Array showing Decaying Epsilon-Greedy Value Matrix (Q) for episode 1 printed out and is correct. |
|  | 2 | Part 5: Array showing Decaying Epsilon-Greedy Value Matrix (Q) for episode 10 printed out and is correct. |
|  | 3 | Part 5: Array showing Decaying Epsilon-Greedy Value Matrix (Q) for the final episode printed out and is correct. |
|  | 2 | Answer to Part 5, Question 9 |
|  | 2 | Answer to Part 5, Question 10 |
|  | 2 | Answer to Part 5, Question 11 |
|  | 4 | Part 6: One chart showing the Cumulative Average Reward for Parts 3, 4, and 5 |
|  | 2 | Answer to Part 6, Question 12 |
|  | **100 pts** |  |

# Grader Comments