Graded Assignment: Graded Assignment: Describe Three MDPs

You passed!
Congratulations! You earned 12 / 12 points. Review the feedback below and continue the course when you are ready.

✦ **AI Grading**

Your assignment has been graded by AI. View your scores below.

Instructions   **My submission**   Discussions

DSP Project

Submitted on May 31, 2025

PROMPT

Create an MDP. Remember to describe the states, actions and rewards. Make sure your three MDPs are different from each other.

MDP 1: Autonomous Vehicle Navigation

States: The state consists of the vehicle's current position on a road network, current speed, traffic conditions around the vehicle, and weather conditions. For example: (intersection_A, 45_mph, heavy_traffic_ahead, rainy).

Actions: The vehicle can choose from discrete actions including accelerate, brake, maintain_speed, change_lane_left, change_lane_right, or turn (left/right at intersections).

Rewards: The agent receives +10 for reaching its destination safely, -1 for each time step to encourage efficiency, -50 for accidents or traffic violations, +2 for maintaining safe following