

# CS 590: Adv. Artificial Intelligence

## Assignment 3 – Spring 2025

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### Problem 1 [8pts]

For the gridworld example below, we will perform reinforcement learning.

	D	G
C	A	B
F	E	

Consider the following observed transitions:

(A, South, E, 2), (E, North, A, 1), (A, East, B, 2), (A, North, D, 4), (B, West, A, 3), (A, West, C, 4)

The initial value of each state is 0, and  $\gamma = 0.1$  and  $\alpha = 0.5$ . Don't round your answers.

- [4pts]** Perform TD learning and report all the learned values for all states in gridworld.
- [4pts]** Perform Q learning and report all the learned Q-values in gridworld.