9/30/2021

# Assignment 5: Reinforcement Learning (RL)

## The instructions—about this Word file template, the evaluation matrix, no more than 4 pages, and appendices—are as before.

## Provide figures if doing so contributes to clarity and demonstrating your understanding.

## What AItic Will Learn

Suppose that you want to build an AI tic-tac-toe player (we’ll call it AItic) which knows only the rules of the game but needs to learn how to win via RL. You plan to carry this out by repeatedly playing one copy of AItic against another.

In one or two sentences, describe concretely what kind of thing AItic would learn.

Your responses replace this.

## AItic Code Format

Provide a Python code fragment showing the data structure for your answer in Part 1. For example, *this list:* or *this class: …*, etc.

Your responses replace this.

## The RL Process for AItac

In 3 sentences excluding figures, and as concretely as you can, describe the reinforcement learning process for AItic.

Your responses replace this.

Continue with Parts 4 and 5 below.

(If you are *very* ambitious and are willing to take *a lot* of time by the assignment deadline, you have the option to implement 1 through 3 above instead.)

## An Application Described

In 4 sentences or fewer, excluding figures, concretely describe an application not in the literature that you would solve with reinforcement learning. Point out what would be learned and why RL would be appropriate.

Your responses replace this.

## The RL Process for Your Application

In 3 sentences or fewer, excluding figures, describe the reinforcement learning process for your application described in Part 4, as concretely as you can but not using code. You may want to consider increasing levels of learning sophistication.

Your responses replace this.

# Evaluation

