

CS 175 Homework 1

Project in AI: Winter 2020, CS 175, Winter 2020

Due: 11:59pm Wednesday January 15, submit via Canvas

Instructions and Guidelines for Homeworks

- Please answer all of the questions and submit a scanned copy of your written solutions to Canvas (either hand-written or typed are fine as long as the writing is legible).
- All problems are worth 10 points unless otherwise stated. All homeworks will get equal weight in computation of the final grade for the class.
- The homeworks are intended to help you work through the concepts we discuss in class in more detail. It is important that you try to solve the problems yourself. The homework problems are important to help you better learn and reinforce the material from class. If you don't do the homeworks you will likely have difficulty in the project later in the quarter.
- If you can't solve a problem, you can discuss it *verbally* with another student. However, please note that before you submit your homework solutions you are not allowed to view (or show to any other student) any *written material* directly related to the homeworks, including other students' solutions or drafts of solutions, solutions from previous versions of this class, and so forth. The work you hand in should be your own original work.
- You are allowed to use reference materials in your solutions, such as class notes, textbooks, other reference material (e.g., from the Web), or solutions to other problems in the homework. It is strongly recommended that you first try to solve the problem yourself, without resorting to looking up solutions elsewhere. If you base your solution on material that we did not discuss in class, or is not in the class notes, then you need to clearly provide a reference, e.g., "based on material in Section 2.2 in"

The objective of this homework is for you to familiarize yourself with the environments you can use for your course project. We would like you to get started with all of them so it can help you decide which one to work with in the project.

Problem 1: Getting Started with MALMO

Project Malmö is a platform for Artificial Intelligence experimentation and research built on top of Minecraft. In this exercise you will install the required packages and do part of the official tutorial.

1. Go to <https://github.com/Microsoft/malmo#getting-started> and follow the installation instructions under **Malmo as a native Python wheel**
2. Follow the tutorial on https://github.com/Microsoft/malmo/blob/master/Malmo/samples/Python_examples/Tutorial.pdf up to **Section 7 The Inventory** inclusive.
3. Submit a screenshot of your code from Section 7 and a screenshot showing that you were able to solve the challenge (get to the diamond).

Problem 2: Getting Started with DuckieTown

1. Coming soon...

Problem 3: Getting Started with ColosseumRL

1. Follow the installation instruction at <https://colosseumrl.igb.uci.edu/doc/installation.html>
2. Run the code under **Playing Games Locally** in https://colosseumrl.igb.uci.edu/doc/getting_started.html#playing-games-locally to play a local game of Blokus
3. Upload one screenshot of the game as it is played and one screenshot showing which players won.