

Homework 1: Artificial Intelligence Intelligence

Due September 11th at 10pm

Part 0: Course Setup

1. CourseIntro

Introduce yourself by creating a CS232 CourseIntros¹ introduction. Make a brief video in which you pronounce your whole name and share a fun fact.

2. Join the Gradescope Course

We will use Gradescope to manage assignment submissions. Please join the Gradescope course using this code: DJ77KE

Part 1: Starting Ideas about AI

Artificial intelligence is a very broad term that has been used to refer to many different kinds of technology, some that already exists, and some that may not even be possible. As we begin our exploration of AI, I'd like you to reflect on the ideas you already have about AI.

Question 1

What kinds of existing AI technologies are you excited about, and why?

Question 2

What kinds of existing AI technologies do you worry about, and why? What ethical concerns do you have about existing technologies?

Question 3

Is there a kind of AI technology that you hope exists in the future? Why do you think it would be beneficial?

Question 4

Is there a kind of future AI technology that you worry about? Why do you think it would be harmful?

¹CourseIntros was created by Wellesley faculty alum Susan Buck.

Question 5

Is there a kind of AI technology that you have heard discussed or seen portrayed in media that you don't think will ever be possible to build?

Part 2: Reading Reflections

These questions ask you to reflect on Jordan 2019.

Question 1

Briefly summarize the differences between the terms **AI**, **IA**, and **II** as Jordan uses them.

Which do you personally find the most interesting, and why?

Question 2

Humans are notoriously bad at estimating the intelligence of non-humans.² Many of the forms of AI that we will discuss in this class are about mimicking human abilities. Do you think this is an appropriate goal or a limitation?

Part 3: Python Refresher

Starting next week, each homework assignment will involve a substantial amount of Python programming. Please spend some time practicing the following Python skills until you feel confident:

- Dictionaries, lists, and tuples
- List comprehensions
- Recursion
- Error handling: `assert`, `try/except`, and `raise`
- Classes

Complete the exercises in this Python review: <https://inst.eecs.berkeley.edu/~cs188/su21/project0> from Berkeley. Take a screenshot when you pass all three autograder tests, and submit this **along with your code** as part of this assignment.

Important: the Berkeley website says you need to have Python 3.6: please ignore this. We will use Python 3.8.

My solutions for Questions 2 and 3 are only a couple of lines of code. Your life will be easier in this class if you become familiar enough with Python list comprehensions to do this as well.

²Also, of humans.

You should also read through the Unix commands that the review discusses and make sure you are familiar with them. You will need to be able to run Python files from the command line and do some basic file manipulation in this class, and it will help you to be confident with these commands.

Submission

To submit your homework, zip together your write-up, the files you modified in Part 3, and a screenshot of the autograder. Submit your work as a zip file on Gradescope.