

Homework 1: Artificial Intelligence Intelligence

Due September 3rd 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: WN8EX4

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

Question 3

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

¹CourseIntros was created by Wellesley faculty alum Susan Buck.

Part 2: 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
- Reading data from files (text files, JSON, CSV)
- Passing in command-line arguments
- Recursion
- Error handling: assert and try/except
- Classes

If you find that you are rusty on Python, you can study from this [Python review](#). **Homework assignments will assume that you are comfortable with everything that it covers.**

Next, check your skills by completing the Python functions in the three files for this week's starter code, following the comments in the files.

File 1: readText.py

This is a simple exercise to read text from a file. You can run it on **animals.csv**

File 2: readCSV.py

This requires using Python's csv library to read data from a file like **animals.csv** in CSV format.

File 3: countNames.py

This file does some simple exercises with the data in **animals.csv**.

My solution for File 3 is only 40 lines of code, including comments. Your life will be easier in this class if you become familiar enough with list comprehensions, sorting, and dictionaries to do this as well.

Autograder For this assignment, I have provided an autograder that lets you test your solutions. You can run it as follows:

```
python autograder.py readText.py
```

Command Line You will need to be able to run Python files from the command line and do some basic file manipulation in this class. If you don't know how to use the command line, please work through this guide put together by the CS Club: [Shell Workshop materials](#).

Part 3: Reading Reflections

Each week, there will be an assigned reading. Please make sure to read this before coming to class on Tuesday. Homework assignments will include a couple of reflection questions about the reading. They are typically open-ended and graded based on the thoughtfulness of the response.

This week, the 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?

Submission

Submit your write-up and the files you modified in Part 2 on Gradescope. **Please use the original names of the code files in your submission.**

²Also, of humans.