In general, there are two main ways to develop your Python programs: as Python scripts and as Jupyter notebooks. We will use both methods as they have their own advantages. For the assignments, if you use Python, we expect your submissions to be Python scripts that we can run and test. However, for the purpose of understanding AI techniques and algorithms, we will use many Jupyter notebooks to make sure that it's easier for you to follow and explain the concepts. For a discussion of the pros and cons of these two methods, please read this article: https://medium.com/@kevin_sossav/difference-between-jupyter-notebooks-and-python-scripts-7c0bfc6c8692#:~:text=Jupyter%20Notebooks%20allow%20you%20to,time%2Dconsuming%20for%20larger%20scripts.

1. *To write Python scripts, we strongly recommend using VS Code.*
2. To develop Jupyter notebooks, we recommend that you install Anaconda to utilise the feature-rich **aima-python** library that comes with the textbook.

Anaconda is installed on your system:

Run Powershell for Anaconda

Create virtual env:

- conda create -n yourenvname [python=x.x anaconda]
- (e.g., conda create -n aima)

Activate virtual env:

- conda activate yourenvname
- (e.g., conda activate aima)

See Installation Guide at: https://github.com/aimacode/aima-python/tree/master

To download the repository:

```
git clone https://github.com/aimacode/aima-python.git
```

Then you need to install the basic dependencies to run the project on your system:

```
cd aima-python
pip install -r requirements.txt
```

You also need to fetch the datasets from the `aima-data` repository:
```
git submodule init
git submodule update
```

Wait for the datasets to download, it may take a while. Once they are downloaded, you need to install `pytest`, so that you can run the test suite:
```
pip install pytest
```

Then to run the tests:

```
py.test
```

And you are good to go!

To execute a notebook, run:

```
jupyter-notebook.exe
```