

Section 0: Setting Up Your Programming Environment

CS 2080: Applied Privacy for Data Science, Spring 2025

1 Installing Python

The latest version of Python can be downloaded and installed from the official website:

- Windows/macOS/Linux: <https://www.python.org/downloads/>
- Follow the installation instructions for your operating system.
- Ensure you check the option to “Add Python to PATH” during installation.

To verify that the installation was successful, open a terminal or command prompt¹ and run:

```
python3 --version
```

or

```
python --version
```

You should see a response like: `Python 3.xx.xx` indicating that the install was successful.

2 Setting Up a Virtual Environment

A virtual environment helps manage dependencies for different projects. To create and a virtual environment, run the following command in your terminal or command prompt:

```
python3 -m venv cs2080
```

This creates a virtual environment named `cs2080`. Once the virtual environment has been created, you can *activate* it using the following commands depending on your operating system:

- On Windows:

```
cs2080\Scripts\activate
```

- On macOS/Linux:

```
source cs2080/bin/activate
```

To deactivate the virtual environment, simply run `deactivate`.

3 Installing Jupyter and Running a Notebook

Once the `cs2080` virtual environment is activated, install Jupyter Notebook:

```
python3 -m pip install jupyter
```

You can then launch a Jupyter Notebook with the command `jupyter notebook`. This will open a web-based interface for running Python code which you can access from your browser. If the notebook doesn't open automatically, you should be able to access it by typing `http://127.0.0.1:8888` into your browser's address bar.

After opening Jupyter, you can create and run your first notebook by selecting **File --> New --> Notebook --> Python 3**. You can then write and run python code, for example, by entering `print("Welcome to CS2080")` in the cell and hitting the **run** button.

¹On Windows: **Win + R**, type `cmd`, then press **Enter**; On MacOS: **Cmd + Space**, type `Terminal`, then press **Enter**; On Linux: **Ctrl + Alt + T**)