

Configuring Python & Tools

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Download/Installing Python

- We will be using Python 3 in this course
 - There are some differences between Python 3 and Python 2
 - If you already have Python 2 installed, please upgrade to Python 3
- To download and install Python, go here: <https://www.python.org/downloads/> (Download the latest version)
- This download/install comes bundled with IDLE (Python's Integrated Development and Learning Environment)
 - Includes an interactive Python *interpreter* and *script editor*



Using IDLE – Running a Python Script

- To create and run a Python script in IDLE, you must first create and save a script file
 - Go to “File” --> “New File”
 - Go to “File” --> “Save”
- To open an existing script
 - Go to “File” --> “Open...”
- To execute a script
 - Go to “Run” --> “Run Module”



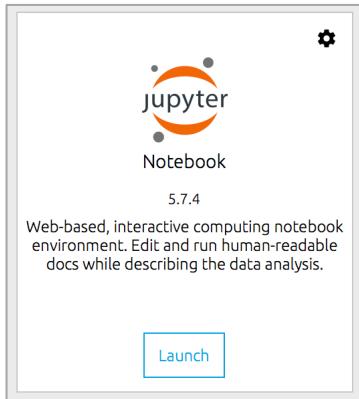
Using IDLE – Keyboard Shortcuts

- To execute a command in the Python *shell*
Press **Enter**
- To execute previous commands
Use **CTRL + p** or **CTRL + n** to toggle commands in your history
 - To change this default setting, go to IDLE → Preferences → Keys
- To execute a script in the Python *script editor*
Press **F5**
On a Mac, press **FN + F5**
- To save a script in the Python *script editor*
Press **CTRL + S**
On a Mac, press **CMD + S**



Jupyter Notebook

- Jupyter Notebook App: Runs in a browser on your computer
 - Includes interactive Python *interpreter* and *script editor*
 - To install, download Anaconda, a data science platform. This will install Python and Jupyter Notebook all at once: <https://www.anaconda.com/download> (Download the latest version)
 - To run, open Terminal on Mac or Command Prompt on Windows and run: `jupyter notebook`
 - Or launch from the Anaconda Navigator



For reference: <http://jupyter.org/install.html>

Using Jupyter Notebook – Keyboard Shortcuts

- To execute code in a cell in a notebook
Select the cell and press **CTRL + Enter**
- To execute code in a cell in a notebook, and select the next cell
Select the cell and press **Shift + Enter**
- To insert a cell above
Select the cell and press **a**
- To insert a cell below
Select the cell and press **b**
- To delete a cell
Select the cell and press **dd**
- To get help with Jupyter Notebook (Keyboard shortcuts)
Anywhere outside of a cell, press **h**
- To get help with a Python function
Put cursor inside parenthesis of function, and press **Shift + Tab**



Using Jupyter Notebook – Exporting a Python Script

- To create Python scripts in Jupyter Notebook
 - Export a Python script file and save it as *<your_script>.py*
 - Go to “File” --> “Download As” → “Python (.py)”



repl.it

- repl.it: Online Python interpreter that runs in the browser
 - Includes an interactive Python interpreter and script editor:
<https://repl.it/languages/python3>



Using repl.it

- Navigate to the Python IDE here: <https://repl.it/languages/python3>
- This is the Python *shell*, which allows you to write and run interactive Python commands

The screenshot shows the repl.it Python IDE interface. On the left, there's a sidebar with icons for file operations, a cube (representing 3D), user management, a play button, and settings. The main area has a header with the user handle '@wcai/QuickwittedAlarmedCell', a 'fork' button, a green 'run' button with a play icon, a 'share' button, a '+ new repl' button, a 'talk' button, and a 'Sign up' button. Below the header, there's a code editor window titled 'main.py' containing the single line of code: 'print('Hello World from my script!')'. To the right of the code editor is a terminal window with a red border. The terminal displays the output of the run command: 'Python 3.7.4 (default, Jul 9 2019, 00:06:43) [GCC 6.3.0 20170516] on linux' followed by 'Hello World from my script!' and a prompt '>'. A red arrow points from the top-left towards the terminal window.

Using repl.it

- Navigate to the Python IDE here: <https://repl.it/languages/python3>
- This is the Python *script editor*, which allows you to write, run, and save Python scripts

The screenshot shows the repl.it Python script editor interface. At the top, there's a header with a user icon, the handle '@wcai/QuickwittedAlarmedCell', a 'No description' note, a 'fork' button, a green 'run' button, a 'share' button, a '+ new repl' button, a 'talk' button, and a 'Sign up' button. A red arrow points from the text 'This is the Python script editor, which allows you to write, run, and save Python scripts' to the 'run' button. Below the header, on the left, is a sidebar with icons for file operations like upload, download, and settings. The main workspace is divided into two panes. The left pane contains the code editor with 'main.py' open, showing the single line:

```
1 print('Hello World from my script!')
```

. The right pane shows the terminal output of the script execution:

```
Python 3.7.4 (default, Jul 9 2019, 00:06:43)  
[GCC 6.3.0 20170516] on linux  
Hello World from my script!
```

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Using repl.it – Keyboard Shortcuts

- To execute a command in the Python *shell*
Press Enter
- To execute previous commands
Use up arrow or down arrow to toggle commands in your history
- To execute a script in the Python *script editor*
Press CTRL + Enter
On a Mac, press CMD + Enter
- To save a script in the Python *script editor*
Press CTRL + S
On a Mac, press CMD + S



Python Help

- Python Language Resources
 - Python Language Reference: <https://docs.python.org/3/reference/index.html>



Python Help – Other Tools

- Other Python Tools (IDEs)
 - PyCharm: Python IDE
 - <https://www.jetbrains.com/pycharm/download/>
 - Eclipse with PyDev: Python IDE for Eclipse
 - Text Editors: Emacs, VI, Sublime, etc.

