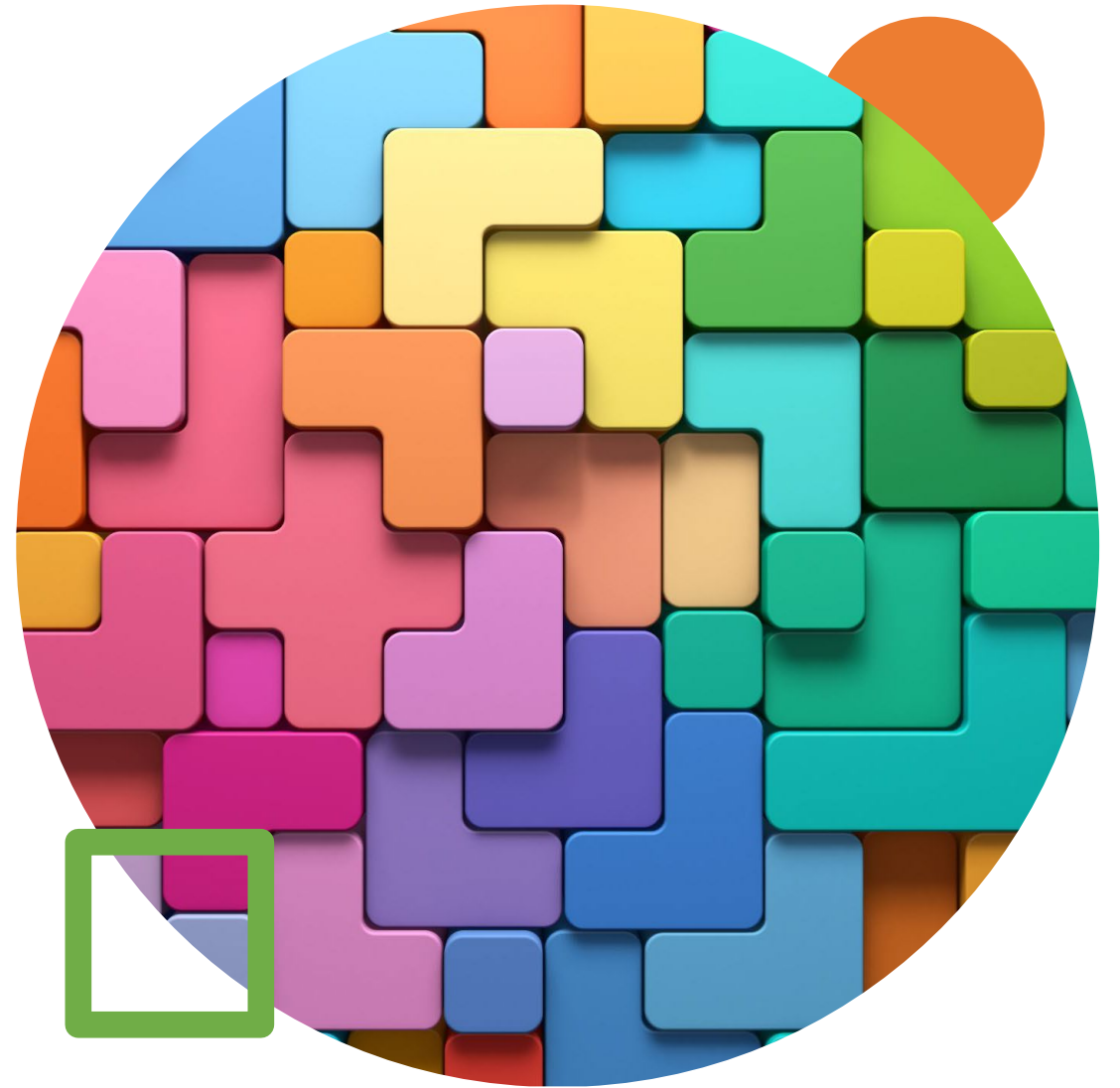# Installing VS Code and Python

Visual Studio Code

- VS code is a code editor developed and released by Microsoft, it is free and open-source. The most up-to-date version is available on the official website of visual studio
  - https://code.visualstudio.com .
- Download and save the VS code installer for macOS (VSCode-XXX-Universal.zip) to your computer.
- Copy the downloaded "Visual Studio Code" from the Downloads folder to Applications folder.

Python and Jupyter

- Click the Extensions icon on the left side of VS Code to go to the Extensions Marketplace.

- Next, search for Python in the marketplace, find Python published by Microsoft. Then click install button next to Python. Once the installation is finished, the install button will change to a Manage icon.

- Search Jupyter and install the package that is published by Microsoft and click install.
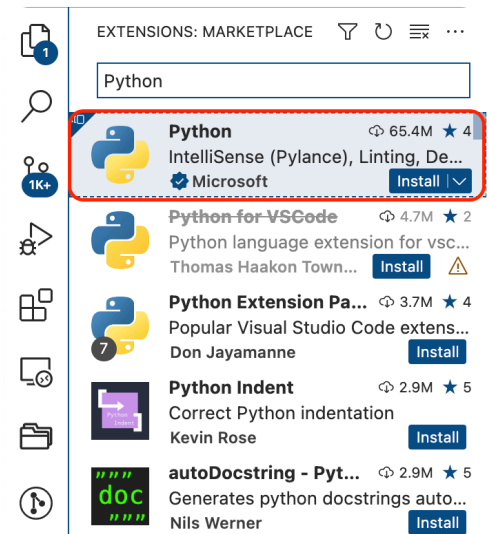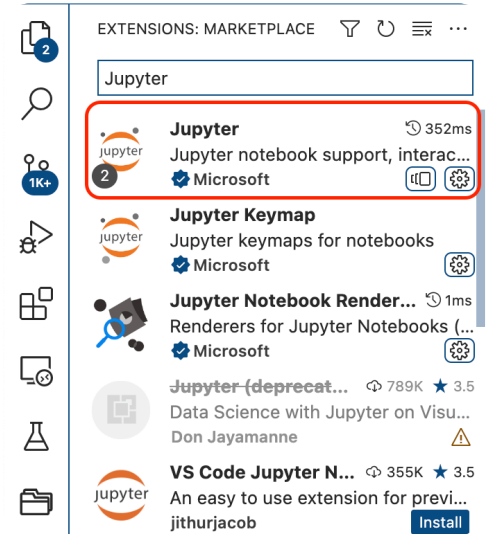
Python interpreter

- We can install the python interpreter from the [Python official website](https://www.python.org).

- In the Download section, select your system macOS to download the latest version of Python. Double click the downloaded installer to complete installation. You may need admin access for the installation.

On Mac

Validate installation

- To validate whether Python has been successfully installed in your computer, inside VS code, open a terminal through "Terminal->New Terminal" menu and then run the following command.

- python3 –version

- Create a new python file and type

- print("hello world")

- Execute the command and see the results in the terminal

Create virtual Environment

- `python3 -m venv .venvPy`

- By default, the Python extensions uses the first Python interpreter that is set in the system path.

- We can use the Command Palette in the VS Code to select a specific python environment. Go to the menu of "View->Command Palette" in the box type in "Python: Select Interpreter" then select the line - **Python 3.X.X ('.venvPy':venv)**,

- You can switch to other environments at the system place anytime.

- Once the environment is set, got to the Terminal and open a new Terminal, you should see (.venvPy) at the beginning of the line.

Install Libs

- python3 -m pip install pandas
- python3 -m pip install numpy
- python3 -m pip install diagrams
- python3 -m pip install matplotlib
- python3 -m pip install networkx

On Windows

Validate installation

- To validate whether Python has been successfully installed in your computer, inside VS code, open a terminal through "Terminal->New Terminal" menu and then run the following command.

- py -3 –version

- Create a new .ipynb file and type

- print("hello world")

- Execute the command and see the results in the terminal
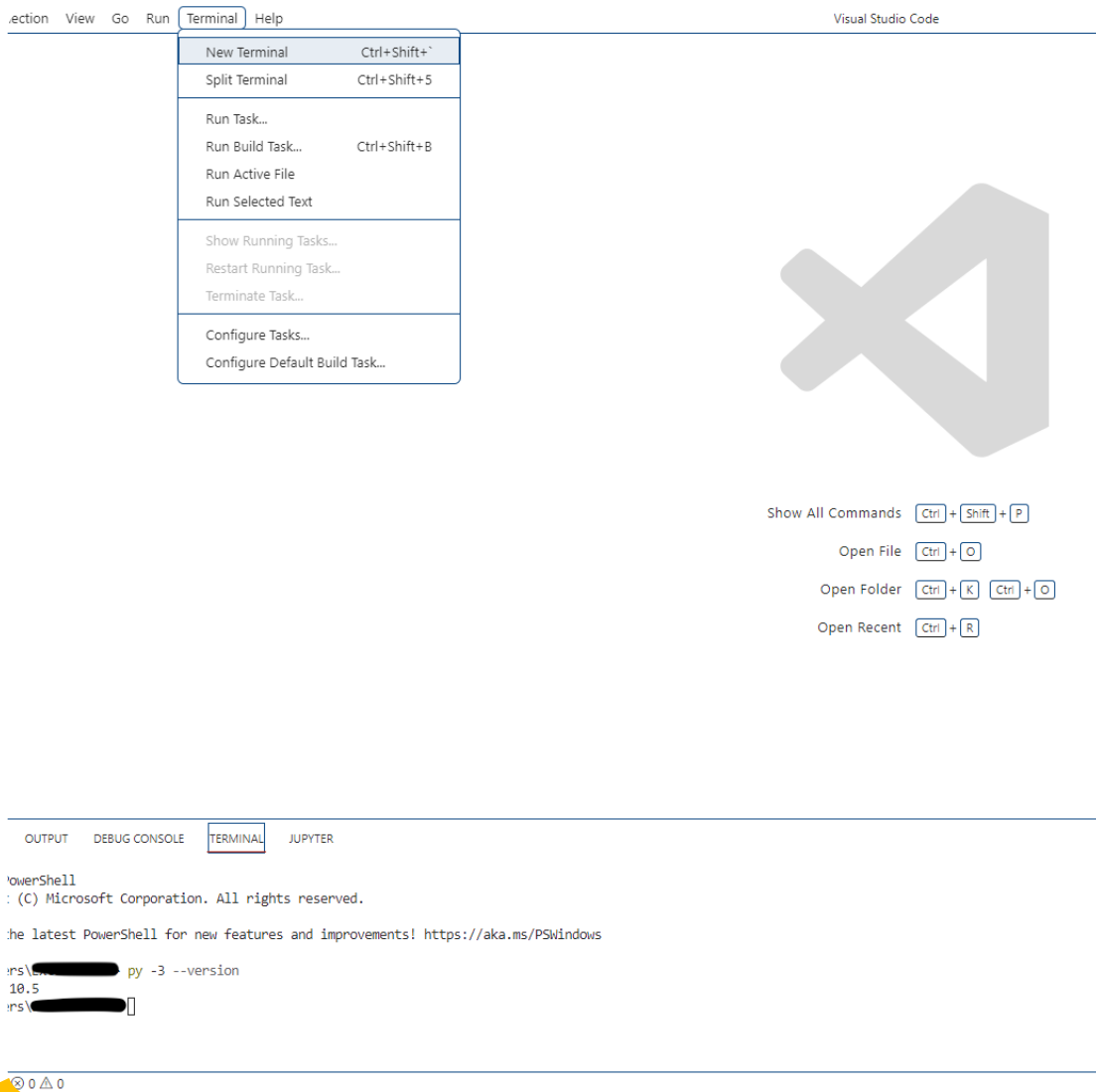
Create virtual Environment

- <mark>py -3 -m venv .venvPy</mark>

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- You can switch to other environments at the system place anytime.

- Once the environment is set, got to the Terminal and open a new Terminal, you should see (.venvPy) at the beginning of the line.

- **Note**: when you execute at the command line, make file is open in VS code. If you already have a file open, the environment can't be created correctly. Please close all the opened files and go though the virtual env steps.

Install Libs

- `pip install pandas`
- `pip install numpy`
- `pip install diagrams`
- `pip install matplotlib`
- `pip install networkx`