

Discussion 1: Install Software and Run Code

SI 206: Data-Oriented Programming

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School of Information

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Install
Software

Anaconda

VSCode

Write Code in
VSCode

Create Workspace

Create File

Write Python Code

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Install Extensions

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Download Anaconda

- 1 Open in browser: <https://www.anaconda.com/download>
- 2 Scroll down and choose your OS: **Windows**, **Mac** or **Linux**

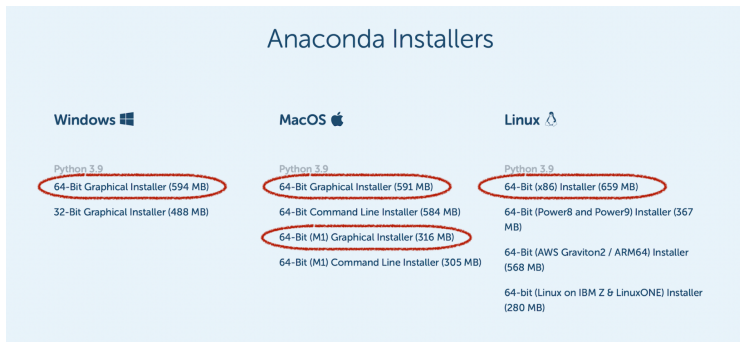


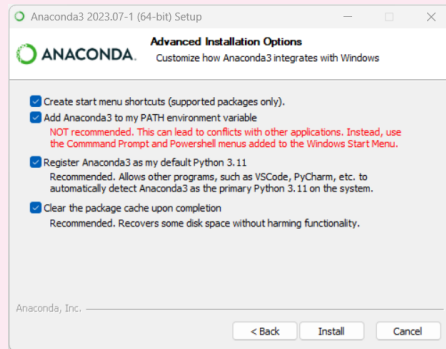
Figure 1: Anaconda installers for different OS

Install Anaconda

- Run the installation package and follow the instructions

If you are using Windows

- 1 Check the box with option:
**Add Anaconda3 to my PATH
environment variable**
- 2 This make sure VSCode knows
where to find Anaconda



Open Anaconda

- 1 Once Anaconda is installed, open **Anaconda Navigator** in App launcher
- 2 If you see the following window, it's installed successfully

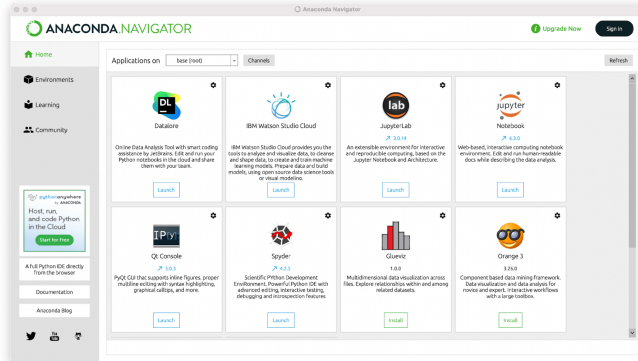


Figure 2: Anaconda navigator window

Install VSCode

- 1 Open in browser: <https://code.visualstudio.com/Download>
- 2 Choose your OS: **Windows**, **Mac** or **Linux**

The screenshot displays the VSCode download page with three main sections for Windows, Linux, and Mac. Each section includes a download button with a downward arrow icon and a list of available installers with their supported architectures.

OS	Download Button	Available Installers
Windows	↓ Windows Windows 8, 10, 11	User Installer: x64, x86, Arm64 System Installer: x64, x86, Arm64 .zip: x64, x86, Arm64 CLI: x64, x86, Arm64
Linux	↓ .deb Debian, Ubuntu	.deb: x64, Arm32, Arm64 .rpm: x64, Arm32, Arm64 .tar.gz: x64, Arm32, Arm64 Snap: Snap Store CLI: x64, Arm32, Arm64
Mac	↓ Mac macOS 10.11+	.zip: Intel chip, Apple silicon, Universal CLI: Intel chip, Apple silicon

Figure 3: VSCode installers for different OS

Open VSCode

- 1 Once VSCode is installed, open **Visual Studio Code** in App launcher
- 2 If you see the following window, it's installed successfully

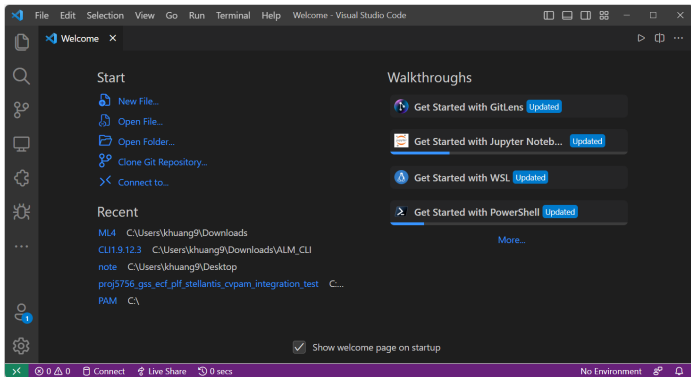


Figure 4: VSCode window

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Create a New Folder and Open in VSCode

- 1 Create a new folder named **SI206**, put it anywhere you like (e.g. Desktop)
- 2 Click **Open Folder** in VSCode (see figure below)
- 3 A new window will pop up, this is your workspace

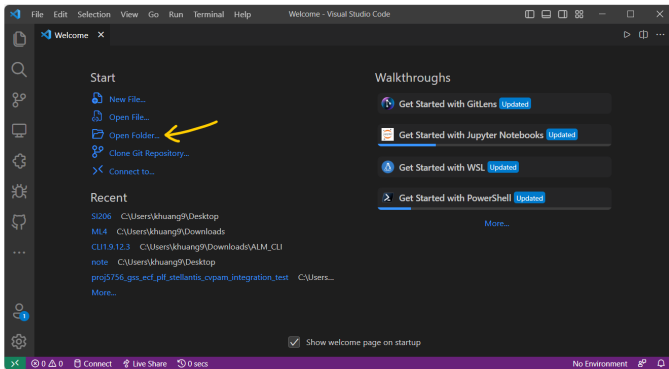


Figure 5: Open folder as workspace in VSCode

Create a New File in Workspace

- 1 Click on the **Add File** icon, input **hello_world.py**, press **Enter**
- 2 Now a new Python file is created in your workspace

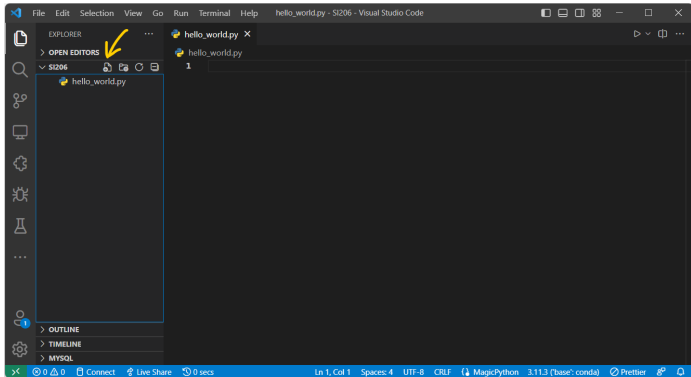


Figure 6: Create file in VSCode

Write a Simple Python Program

Type in the Python code below, which prints out 'Hello, world!':

```
1  # Author: [your_name]
2  # Date: [date]
3  # Class: SI206 Discussion 1
4  # Usage: print hello world
5
6  print('Hello, world!')
```

Coding Tips

A good **file header comment** enables other people to easily understand the general purpose of this file, helping save time reading code in future.

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Why install extensions in VSCode?

- VSCode is only a **text editor**, but not an IDE (Integrated Development Environment), so it doesn't come with **Python interpreter**
- We have installed Anaconda, which comes with Python interpreter and a collection of useful development **packages**
- Extensions can help you do all tedious jobs (e.g. auto completion, format code, find Python interpreter path, generate command to run code)

Install Code Runner (VSCode Extension)

- Go to **Extensions** on the left sidebar, search for **Code Runner**, click **Install**

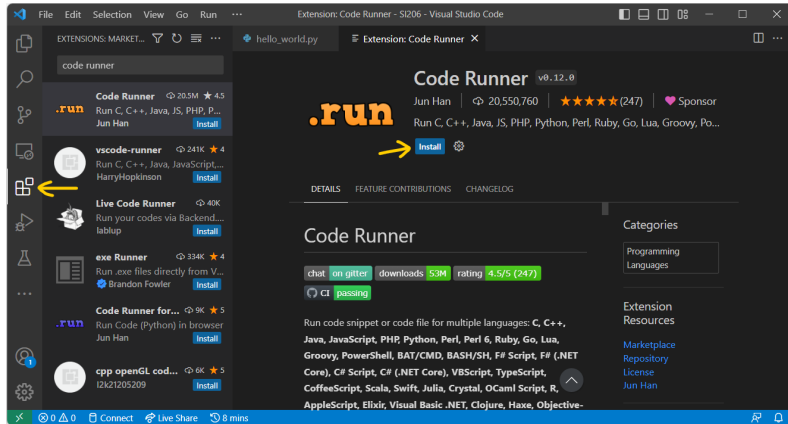


Figure 7: Install Code Runner VSCode extension

Install Python (VSCode Extension)

- Similarly, search for **Python**, click **Install**



Figure 8: Install Python VSCode extension

Choose Anaconda Python Interpreter

- 1 When `.py` file is open, click on bottom right to select Python interpreter
- 2 Choose the option with '`base`' in the drop down menu
- 3 You could see something like `3.11.3 ('base':conda)`

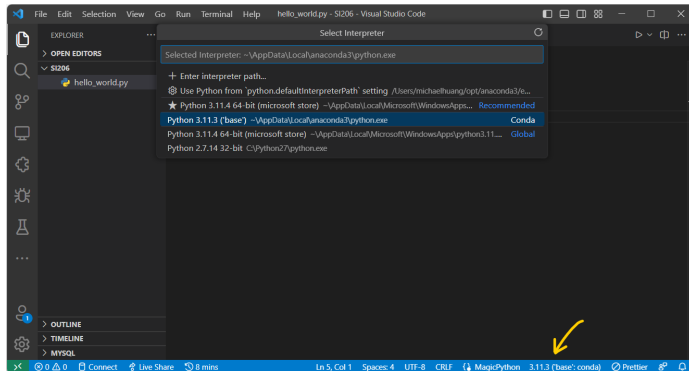


Figure 9: Choose Anaconda Python interpreter

Run Code with Code Runner

- 1 Click the triangle run button ▶ at the upper right corner
- 2 The code would run and output in the VSCode **integrated terminal**

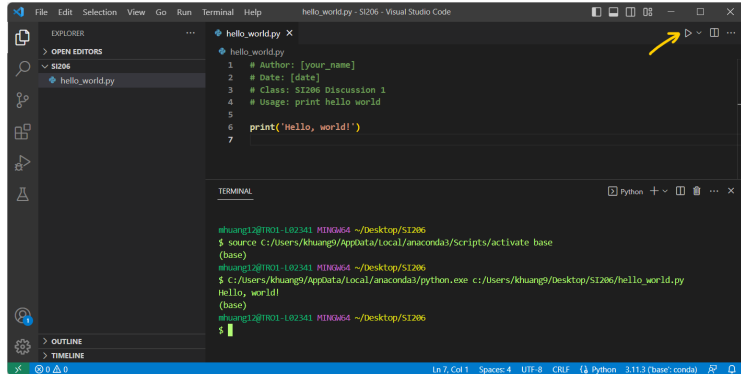


Figure 10: Run Python code

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Question Time!