

Software Setup

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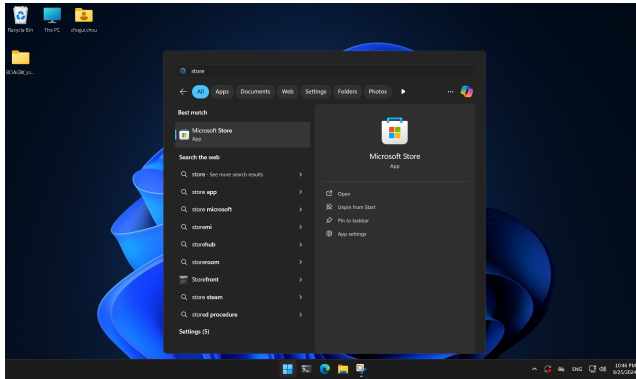
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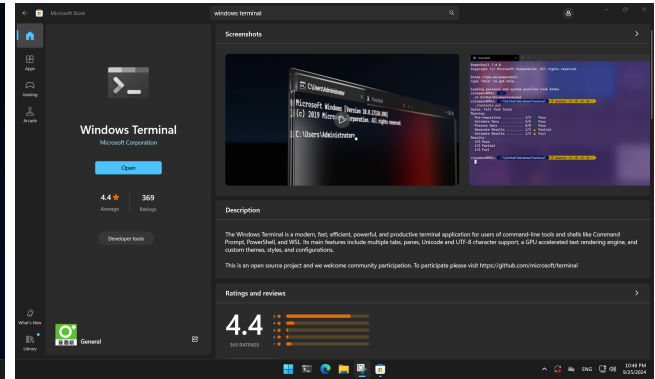
1 Software Setup

1.1 Using Windows Terminal

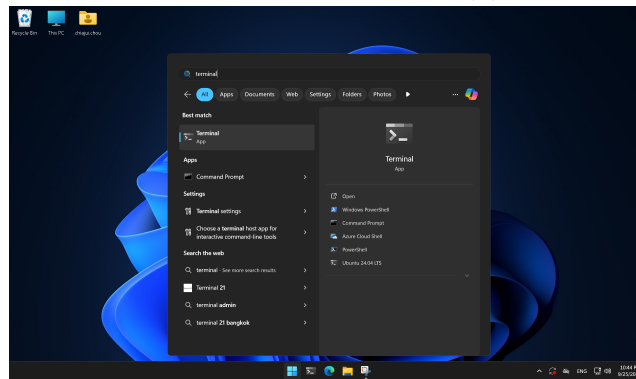
We will use **Windows Terminal** to install Windows Subsystem for Linux (WSL). Open **Start Menu** and search for Windows Terminal. If it's not there, please installed Windows Terminal using **Microsoft Store**.



(a) Microsoft Store



(b) Install Windwos Terminal



(c) Launch Windows Terminal

1.2 Installing WSL 2

References:

1. <https://learn.microsoft.com/en-us/windows/wsl/install>,
2. <https://learn.microsoft.com/en-us/windows/wsl/install-manual>.

Here are the steps to install the Linux subsystem under Windows 10/11:

1. Enable the Windows Subsystem for Linux and the Virtual Machine feature:
 - Open **Control Panel** → **Uninstall a program** → **Turn Windows features on or off**.
 - Check the following items (You can skip some of the items if you don't see it on your computer.):

- **Hyper-V**
- **Virtual Machine Platform**
- **Windows Hypervisor Platform**
- **Windows Subsystem for Linux**

2. Install WSL 2 Linux kernel:

- Download the latest package from here: [here](#) (this link can be found in **Step 4** on the second reference).
- Update the Linux kernel by running the msi file.
- Reboot computer.

3. Set WSL 2 as default version:

- Open **Windows Terminal**.
- Type the command in the terminal: `wsl --set-default-version 2` and press **Enter key**.

4. Install a Linux distribution:

- Look for available Linux distributions:

```
wsl -l -o
```

- Install **Ubuntu-22.04**:

```
wsl --install -d Ubuntu-22.04
```

- Launch WSL by `wsl` and set **username** and **password**.
- Check the distribution and version of the Linux system we install:

```
~$ cat /etc/*release
```

1.3 Visual Studio Code

It's recommended to use Visual Studio Code as our Integrated Development Environment. You can follow the instructions here <https://code.visualstudio.com/> to install Visual Studio Code.

After installation, we need to install several extensions:

1. Python
2. Jupyter
3. Remote Development
4. WSL

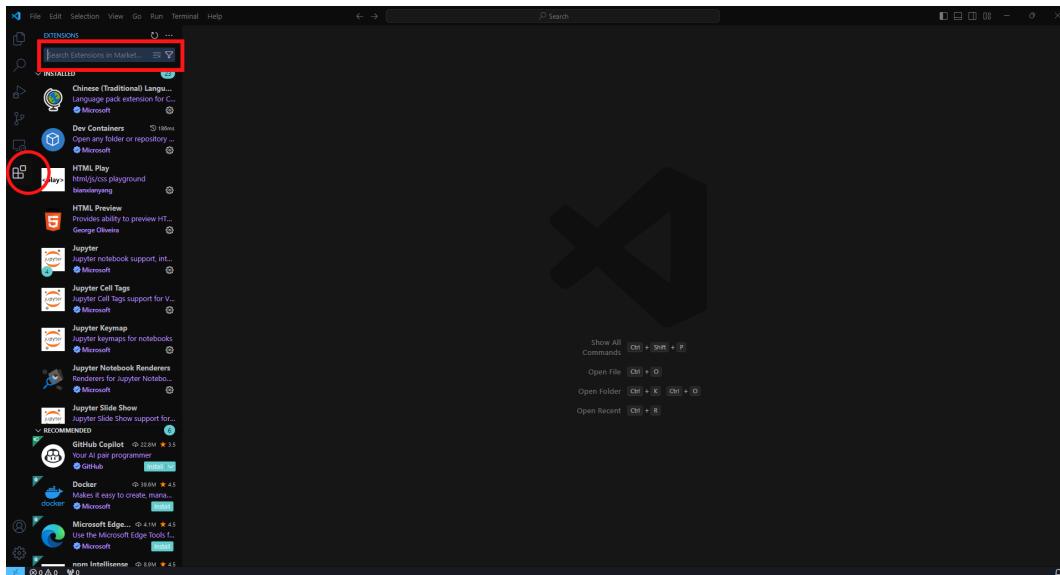


Figure 2: To install extensions, we click the extension icon and search for the extensions in the search bar.

1.4 Google Colab

You can also use Google Colab <https://colab.research.google.com/> to edit and run jupyter notebooks.

2 Python Environment

2.1 Installing Mamba

<https://mamba.readthedocs.io/en/latest/installation/mamba-installation.html>

<https://github.com/conda-forge/miniforge>