

National University of Singapore
School of Computing
CS2109S: Introduction to AI and Machine Learning
Semester I, 2022/2023
Environment Setup
Anaconda

Required Files

- environment.yml

Overview

We will go through step by step on how to install Anaconda, a framework that simplifies packages and dependencies management for Python, as well as how to use Jupyter Notebook using Anaconda.

Note: You may skip these steps if you are familiar with setting up of Python, virtual environments and Jupyter Notebook. However, if you choose to configure your own set up independently, you will be on your own in resolving any version-related issues or bugs.

Setting up Anaconda for Windows and macOS

Note: If you're a macOS user with an M1 chip, please refer to Setting up Anaconda for Linux.

Step 1: Installing Anaconda

Note: You may skip this part if you have installed Anaconda previously.

Install anaconda via this link. Choose **(OS) (x-bit) Graphical Installer** (depends on your OS and whether you are on 32-bit or 64-bit)

Note: Most modern systems should be on 64-bit. To confirm your own system, you can follow this guide.

After done with the installation, open the exe file. Keep clicking next until until the *Install* button shows up. Click *Install* and wait until the installation is done.

Step 2: Create Environment for CS2109S

After you done with the installation, open the Anaconda Navigator app. You should see something similar with Figure1.

1. Click the *Environments* button at the left part of the app.
2. Click the *Import* button at the bottom part of the app.
3. Click the Folder Logo for Local Drive (refer to Figure2) and select *environment.yml*.
4. Rename the environment name into **CS2109S** and click *Import* button. Wait for around 10-15 minutes and your environment is ready.

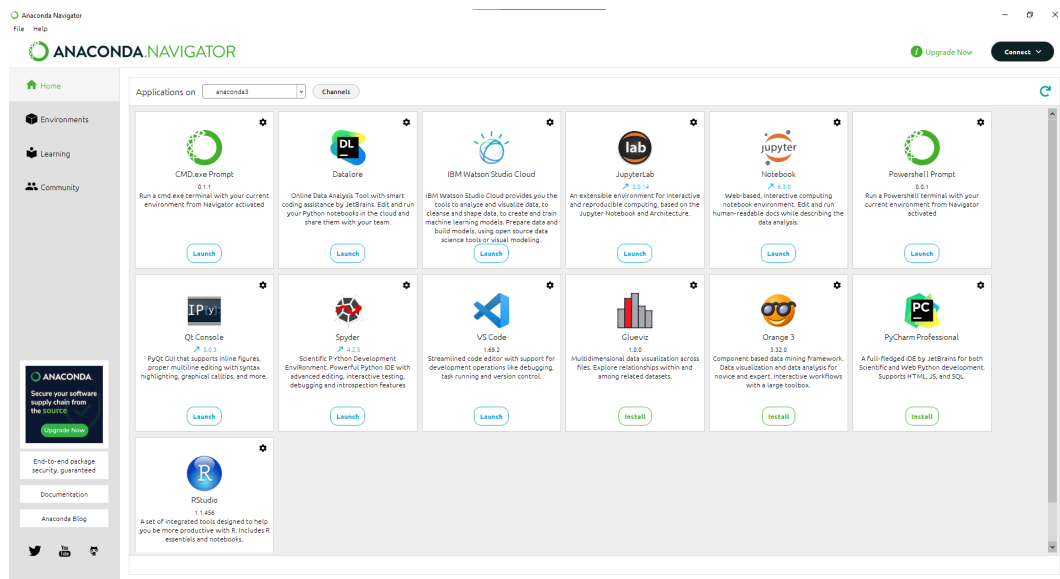


Figure 1: Anaconda Navigator

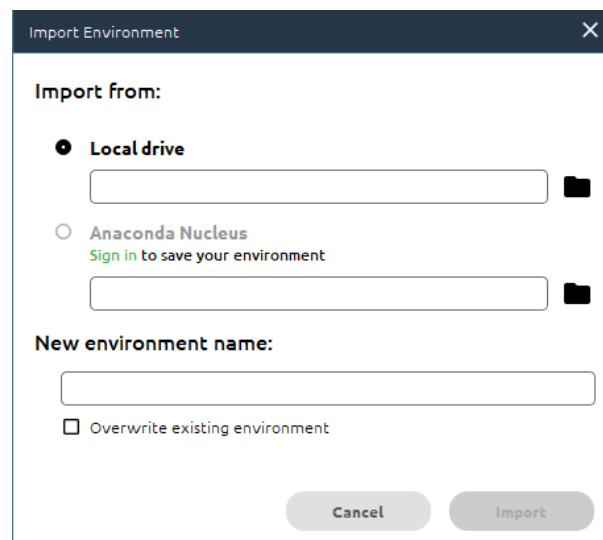


Figure 2: Select the Folder Logo for Local Drive

Step 3: Running Jupyter Notebook on Anaconda

1. Open the Anaconda Navigator App.
2. At the top part of the app, **ensure that we are using CS2109S instead of base(root) environment.**
3. Click the *Launch* button below Jupyter. A browser window will immediately pop up (or a localhost link should show up in the terminal which you should click) as shown in Figure3.
4. Navigate through the directories to find *ps0.ipynb* and click it. You should see rectangles with code snippets OR text inside them as shown in Figure4.
5. To run the code within a **selected** cell (blue vertical line on the left), click the **Run** button on the top menu bar.

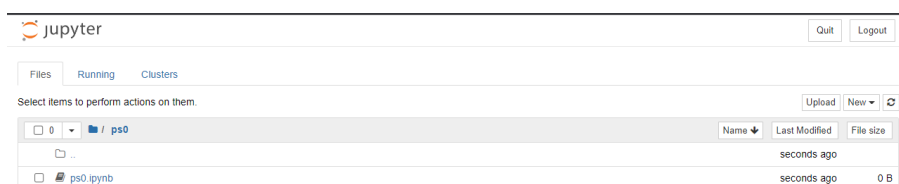


Figure 3: Notebook file explorer

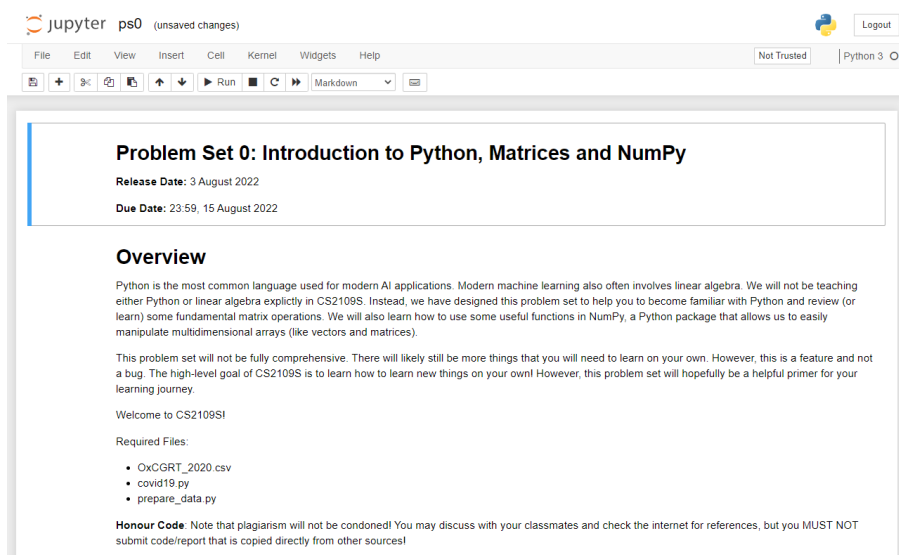


Figure 4: Opening up ps0.ipynb

Setting up Anaconda for Linux

Step 1: Installing Anaconda

Note: You may skip this part if you have installed Anaconda previously.

Install anaconda via this link. Choose any version that supports Linux operating system. After done with the installation, open the exe file. Keep clicking next until the *Install* button shows up. Click *Install* and wait until the installation is done.

Step 2: Create Environment for CS2109S

1. Ensure your current working directory contains *environment.yml*.
2. Type in your terminal `conda env create -f environment.yml`. Wait for around 10-15 minutes and your environment is ready.
3. Type in your terminal `conda env list` and ensure that *cs2109s-ay2223s1* environment exists.

Step 3: Running Jupyter Notebook on Anaconda

1. Open your terminal.
2. Activate the environment by typing in your terminal `conda activate cs2109s-ay2223s1`.
3. Change your current working directory into the folder that contains *ps0.ipynb*.

4. Type in your terminal `jupyter notebook`. If installation was fine, a browser window will immediately pop up (or a localhost link should show up in the terminal which you should click) as shown in Figure3.
5. Navigate through the directories to find `ps0.ipynb` and click it. You should see rectangles with code snippets OR text inside them as shown in Figure4.
6. To run the code within a **selected** cell (blue vertical line on the left), click the **Run** button on the top menu bar.

Troubleshooting

You can contact the teaching staff or check the Coursemology forum if you face any difficulty during the setup/installation process.

Please provide the following information to help us quickly identify your problem:

1. The operating system and version that you are using (e.g, macOS M1).
2. Which step in the instructions given did it fail or produce an error?
3. Take a screen shot of the failure or error.