Simulating PINN Using VS Code & Anaconda

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Date: 07/13/2024

First:

- Download and install VS Code and Anaconda – You can directly click the Vs code and Anaconda here as it is a hyperlink. Take note that you need an email address on the Anaconda website and it will send the download link to your mail inbox.

- After installing the VS Code and Anaconda run it as an Administrator.
- Download and install Python
- Import the necessary libraries needed as stated in the GitHub repository "requirements.txt"

To do this follow these steps:

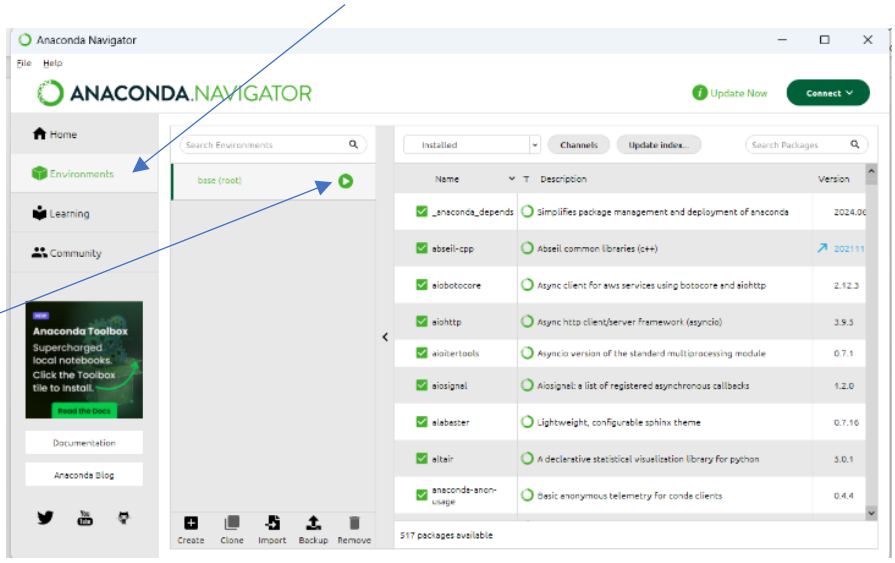
1. **Activate Anaconda Environment:**
   A. Open **Anaconda** Prompt or your terminal, then activate your Anaconda environment where you want to install these packages. If you don't have a specific environment created, you can create one using Anaconda Prompt:

   Copy this code:
   conda create --name myenv python=3.9
   conda activate myenv

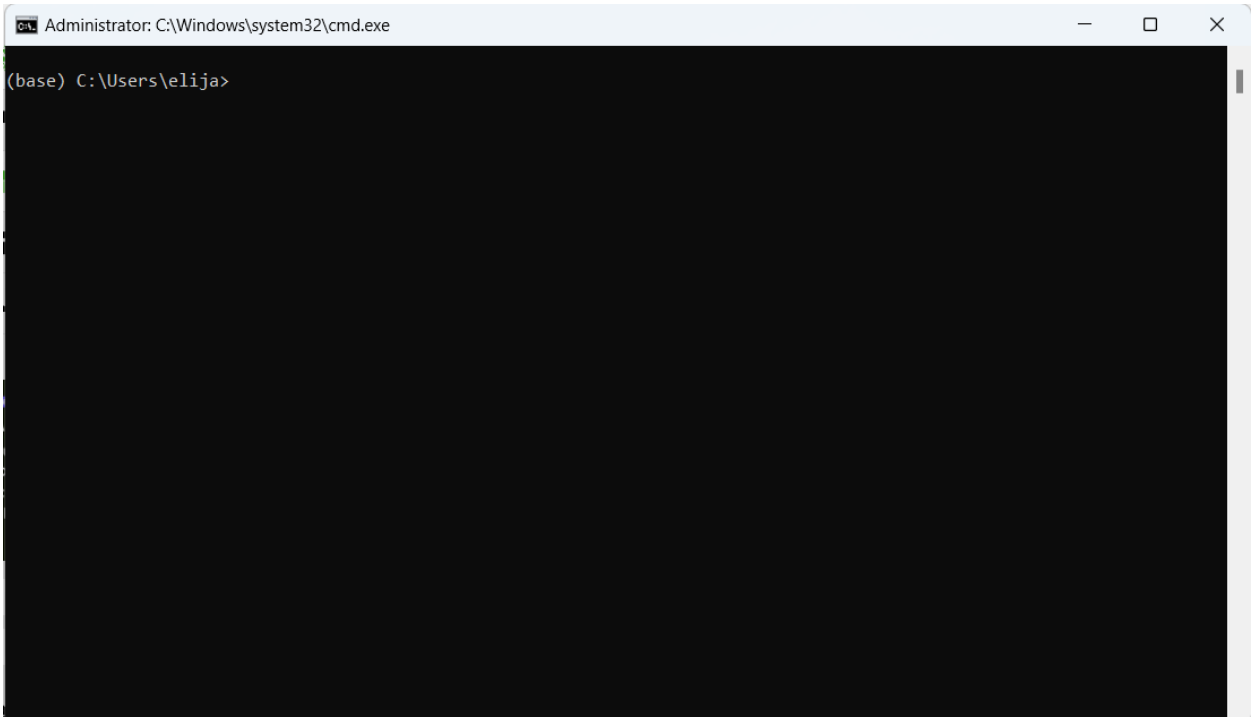
   paste to your Anaconda base or CMD terminal and hit enter.

   Or just open the **Anaconda Navigator** and run as an Administrator then proceed to step 2: "Installing the packages:"

   - To navigate in **Anaconda Navigator** click Environment > base (root) > click the play button.



Click the open terminal, and it should show something like this.

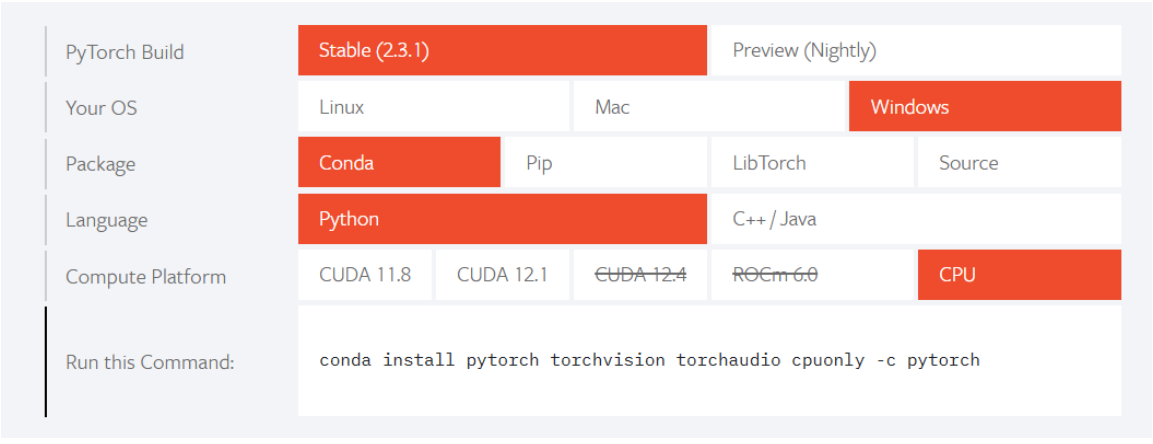


2. Install Packages/Libraries:

- Once your environment is activated or the CMD base terminal of Anaconda is running, copy and paste each line of the code below **one by one** and enter.

conda install numpy==1.22.0
conda install scipy==1.7.3
conda install matplotlib==3.5.1
conda install scikit-learn==1.0.2
conda install pytorch==1.10.0 torchvision torchaudio cudatoolkit=11.2 -c pytorch
conda install joblib==1.0.1

- Note on **PyTorch**: Use the appropriate command based on your system (with CUDA support or without CUDA). Adjust the *cudatoolkit* version if needed based on your CUDA installation. Or if your device doesn't have a GPU (Graphics Processing Unit) and it's just an integrated graphics card which is common among laptops: you can click this PyTorch to go to the website.



Copy this code "*conda install pytorch torchvision torchaudio cpuonly -c pytorch*" please remove the quotation marks and just copy the italicized text.

3. **Verify Installation:**
   - After installation, verify that the packages are installed correctly:

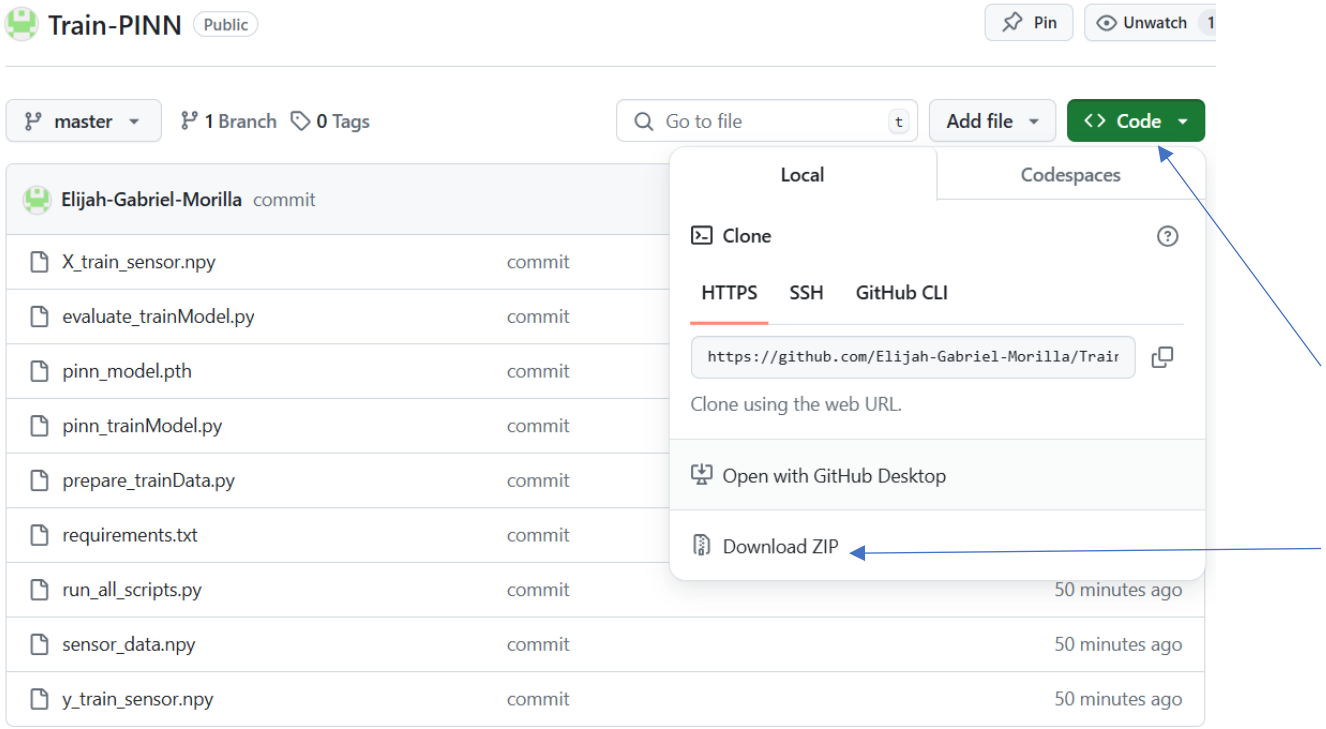
Copy code:
conda list

- This command lists all installed packages in your current Anaconda environment. Check if the versions match what you specified.

- Use in VS Code:

Once installed, you can use these libraries in your Python scripts within VS Code by ensuring that your VS Code interpreter is set to the Anaconda environment where you installed these packages.

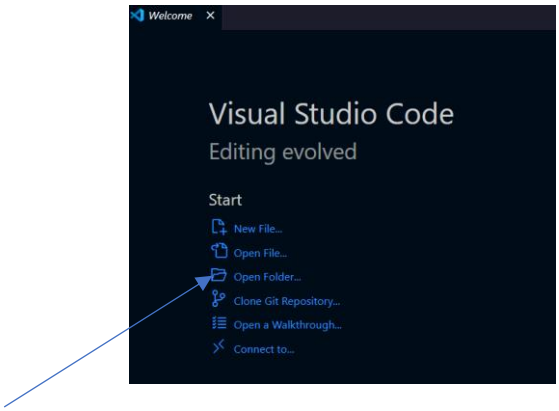
4. **Downloading the files from GitHub**
   - Go to this link: [Elijah-Gabriel-Morilla/Train-PINN (github.com)] and click > **CODE** (green button) then download ZIP.

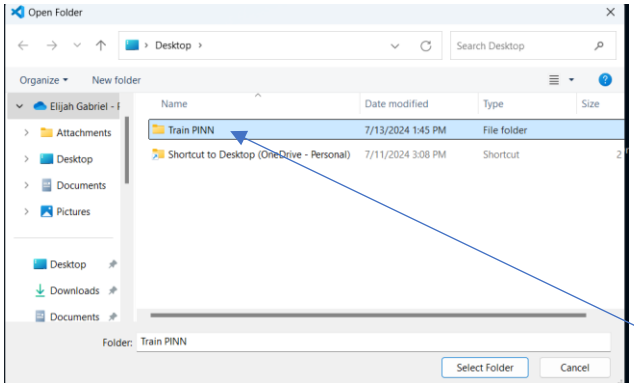


- Once you have downloaded the "*Train-PINN-master*" ZIP folder, extract it and put it on your desktop or wherever you prefer.

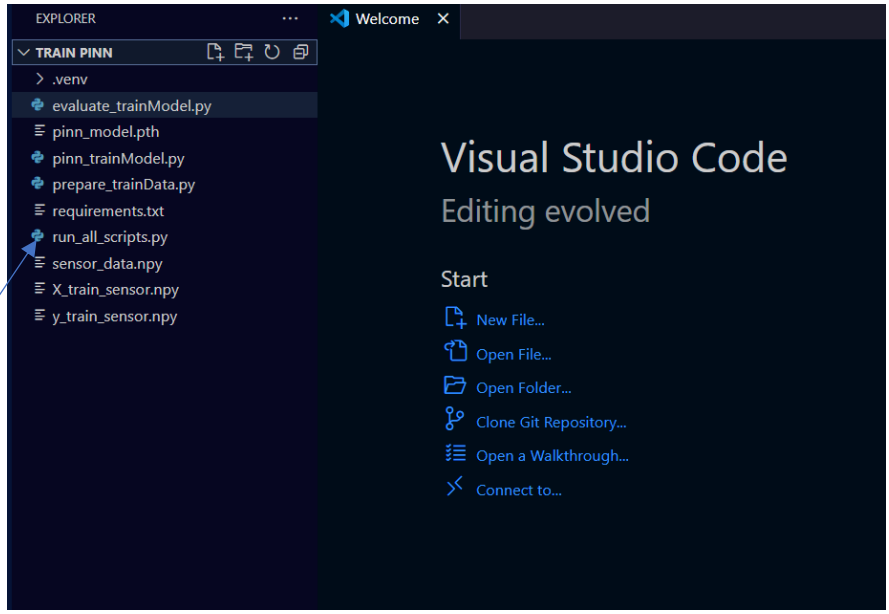
5. Setting up VS Code

- Run VS Code and open the folder "*Train-PINN-master*" you just downloaded from the GitHub repository.

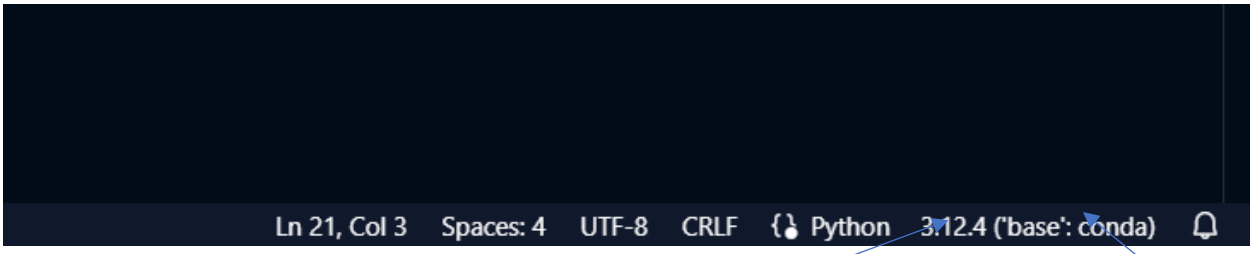




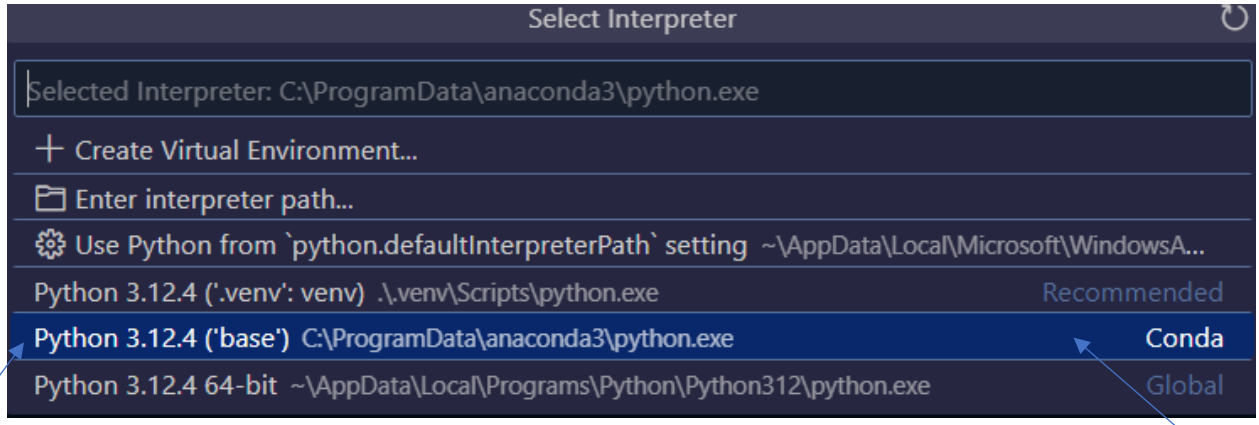
- Once opened it will show the file explorer in VS Code.



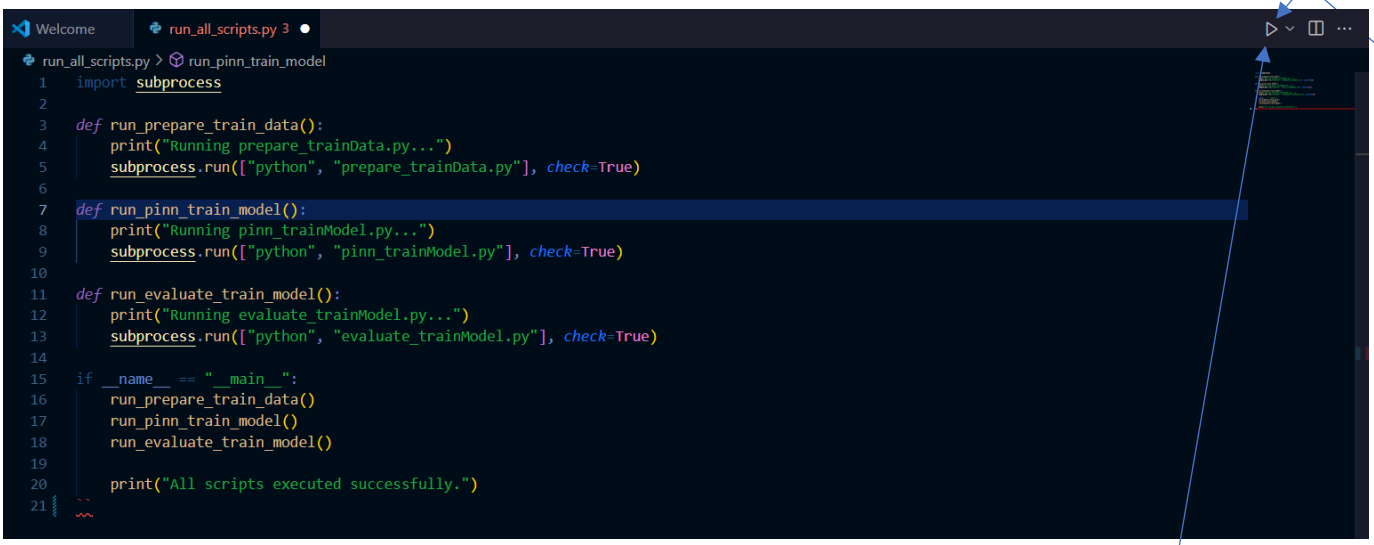
- From there click the *run_all_scripts.py* and select the Anaconda base which can be seen in the lower right of the VS Code.



- After clicking the lower right it should open something like this



- Select the Conda environment and click the run/play button from the upper right.



Assuming there was no error in installing the libraries, software, and code it should run successfully in the terminal.

That sums it all up for this guide, thank you!