Installing Miniconda and Creating Environments

Miniconda is a popular package and environment management tool used for data science and scientific computing. It allows users to easily install, manage, and work with different environments containing various Python packages.

If you want to use jupyter notebooks locally follow the instructions below. Otherwise jump to the final part of this document.

Downloading & Installing Miniconda

- Visit Miniconda installation site
- Choose the appropriate installer for your operating system
- Follow the instructions for installing it on the website

Create Environments:

1. Creating a New Environment:

- Open an Anaconda (miniconda) terminal (search in the task bar for "miniconda")
- Create a new environment with a python version 3.9:

  ```
  conda create --name myenv python=3.9
  ```

  Replace myenv with the desired name for your environment. **Make sure you use Python version 3.9**

2. Activate the Environment:

```
conda activate myenv
```

3. Install Packages:

Either install each package manually from the requirement.txt file

```
pip install package_name
```

Or use the following command

```
pip install -r requirement.txt
```

4. Deactivate Environment When you're done working in the environment, you can deactivate it using:

```
conda deactivate
```

Install Tensorflow

(We will not use this in the first week)

We will be using Tensorflow version 2.10, you can use the following link for step-by-step installation process.

(TF Version 2.10 will not work unless you have Python version 3.9)

If you do not have a GPU and still want to use the notebooks locally, make sure that you don't install the GPU version.

Jupyter Notebooks

1. Notebooks through Jupyter server

- Open a new miniconda terminal and activate the environment that you created
- Start a jupyter server using the following command:

```
jupyter notebook
```

- you can access the server using the following URL"

```
localhost:8888
```

2. Jupyter notebooks using VScode

- Open Extensions tab in vscode
- Install "Jupyter" extension
- Reload vscode
- Create a file with the extension "ipynb", when opened you will be able to see the cells and other jupyter functionalities

3. Using Online Notebooks

- Kaggle notebooks: https://www.kaggle.com/code
- Google Colab: https://colab.google/