

GR5074: Projects in Advanced Machine Learning

Python Environment Setup



Useful Commands

1. `python3 -m venv {root_directory_of_project}` : Creates a virtual environment
2. `source {root_directory_of_project}/bin/activate` : Activate the virtual environment
3. `pip install {package_name}` : Installs the desired python library
4. `!pip install tensorflow` : Add an exclamation mark in front of the command if you run it in a cell in the interactive Python environment

Tip: Always remember to activate the virtual environment before installing packages to ensure they are installed in the correct location, and deactivate the environment when you're done using it with the `deactivate` command.

Ways to Run iPython Notebook

1. Jupyter Notebook on your Local Machine

- a. Jupyter Notebooks can be run locally on your machine by installing Jupyter via pip or conda. Once installed, you can run `jupyter notebook` in your terminal to launch a local instance of the Jupyter environment in your browser.
- b. Use a Python IDE, like PyCharm. It's best to create a virtual Python environment to manage dependencies and avoid conflicts with your global Python installation.
- c. Anaconda - you get an easy-to-use package manager (conda) along with Jupyter and a large set of pre-installed libraries for data science, machine learning, and scientific computing.

2. Google Colab

- a. A cloud-based platform that allows you to run Jupyter Notebooks directly in your browser. It offers the advantage of using powerful GPUs for free, making it ideal for running resource-intensive tasks. Since it's cloud-based, there's no need for local setup.

