CS 482/682 MACHINE LEARNING

ANACONDA/SPYDER TUTORIAL

READ and follow each instruction and execute each one and **SIGN** at the end of the document stating everything worked as described.

Introduction

This tutorial will provide an introduction to Anaconda and Spyder. This is highly basic and you will have to explore and learn various features within Anaconda and related programs over the term.

What is Anaconda Navigator?

Anaconda Navigator is a desktop graphical user interface (GUI) included in Anaconda® distribution that allows you to launch applications and easily manage conda packages, environments, and channels without using command-line commands. Navigator can search for packages on Anaconda.org or in a local Anaconda Repository. It is available for Windows, macOS, and Linux.
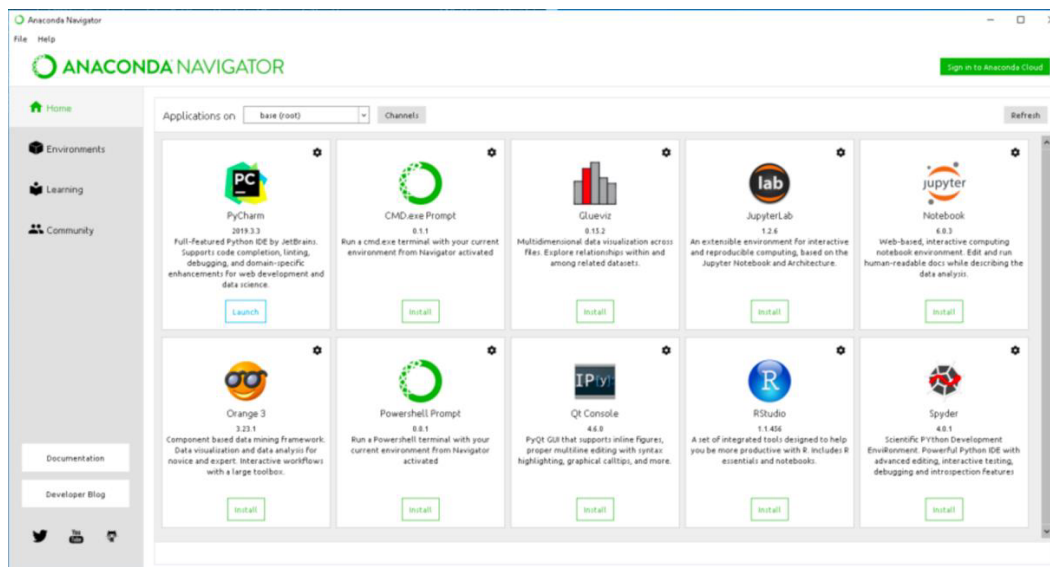
Downloading Anaconda

- Download Anaconda from this link (or search on Google: Anaconda download)
- Select the appropriate version for your operating system

Updating Anaconda

- If Anaconda is already installed, update Anaconda using the following command in the terminal:
  ```
  conda update anaconda
  ```

Anaconda Navigator

- Open Anaconda Navigator

From here you can launch a variety of applications including Jupyter Notebooks and

What applications can I access using Navigator? (descriptions for each)

- Jupyter Notebook: Popular data science IDE with Python and R. Code runs on a browser.
- Spyder: Python IDE
- Glueviz: interactive linked-view data visualization package for Python
- Orange 3 App: data mining through visual programming or Python scripting
- RStudio: R IDE
- Anaconda Prompt (Windows only)
- Anaconda PowerShell (Windows only)
- Advanced conda users can also build their own Navigator applications.

Further documentation and tutorials available from the Anaconda website

What is Spyder?

Spyder is a free and open source scientific environment written in Python, for Python, and designed by and for scientists, engineers and data analysts. It features a unique combination of the advanced editing, analysis, debugging, and profiling functionality of a comprehensive development tool with the data exploration, interactive execution, deep inspection, and beautiful visualization capabilities of a scientific package.

Launch Spyder

To launch Spyder through Anconda, select the launch icon from Anaconda Navigator:

Spyder

4.0.1

Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

Launch
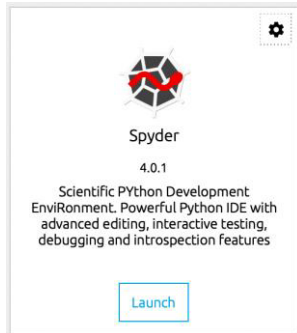
Navigating Spyder

The **Variable Explorer** in the Variable Explorer/Plots/Files allows you to interactively browse and manage the objects generated running your code.

The **Plots** pane in the Variable Explorer/Plots/Files pane shows the static figures and images created during your session. It will show you plots from the IPython Console, produced by your code in the Editor or generated by the Variable Explorer allowing you to interact with them in several ways.

The **Files** pane in the Variable Explorer/Plots/Files is a filesystem and directory browser built right into Spyder. You can view and filter files according to their type and extension, open them with the Editor or an external tool, and perform many common operations.
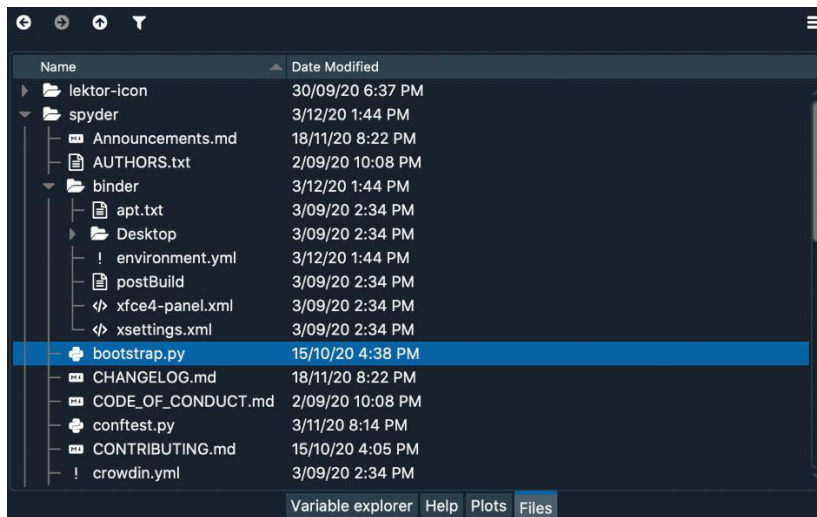
The **IPython Console** allows you to execute commands and enter, interact with and visualize data inside any number of fully featured IPython interpreters. Each console is executed in a separate process, allowing you to run scripts, interrupt execution and restart or terminate a shell without affecting the others or Spyder itself, and easily test your code in a clean environment without disrupting your primary session.
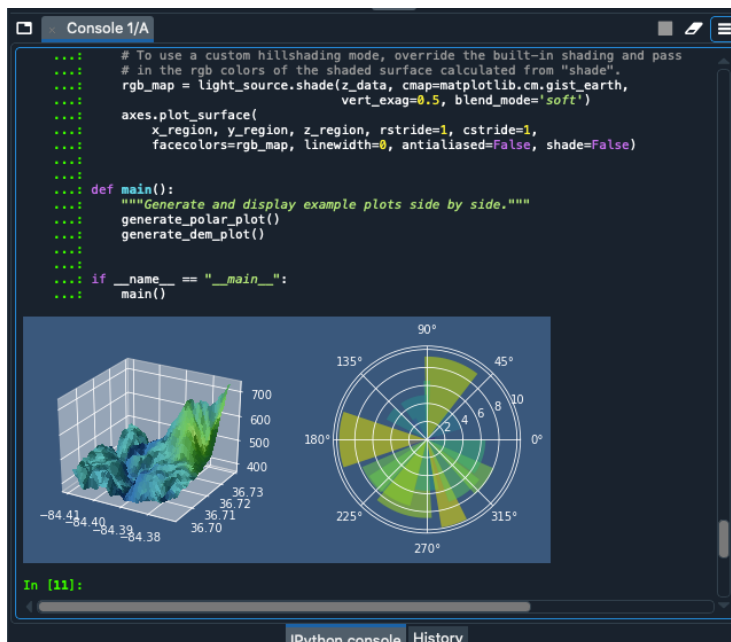
If you see the following error:
Stuck on…
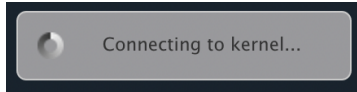
Then…update Anaconda using the following command in the terminal:
```
conda update anaconda
```

Tips for Spyder
1. Ctrl + 1 - Comment/uncomment.
2. Ctrl + 4 - Comment a block of code.
3. Ctrl + 5 - Uncomment a block of code.

SIGN: I acknowledge that I have read the document above and experimented with each feature and they all work as described.

Dominic Woodruff   Zachary Shaver

Your Name