CS4487 - Tutorial 1: Introduction to Jupyter and Python

Welcome to Jupyter (IPython Notebooks)! In this tutorial you will get familiar with the Jupyter computing environment, and also practice writing some small Python programs.

What's Jupyter Notebook?

The Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text. Jupyter Notebook is maintained by the people at [Project Jupyter (https://jupyter.org/)](https://jupyter.org/).

Jupyter Notebook is a spin-off project from the IPython project, which used to have an IPython Notebook project itself. The name, Jupyter, comes from the core supported programming languages that it supports: Julia, Python, and R. Jupyter ships with the IPython kernel, which allows you to write your programs in Python, but there are currently over 100 other kernels that we can also use.

1. Installation

The Jupyter Notebook is not included with Python, so you need to install Python. We recommend Anaconda (https://www.anaconda.com/), which is a free and open-source distribution of the Python and R programming languages for scientific computing (data science, machine learning applications, large-scale data processing, predictive analytics, etc), that aims to simplify package management and deployment.

The Anaconda provides large selection of packages (Jupyter, Numpy, Panda, Conda, etc) and commercial support. It is an environment manager, which provides the facility to create different python environments, each with their own settings. In addition, Anaconda has its own installer tool called conda that you could use for installing a third-party package.

Recommanded version: Anaconda3-4.2.0 (https://repo.continuum.io/archive/) .

You can use Anaconda Prompt or Anaconda Powershell Prompt from the Windows start menu to launch jupyter notebook. Enter the prompt/terminal and run the command: `jupyter notebook` . The jupyter notebook will launch where the current working directory is. You can change the Jupyter notebook startup folder if you want.
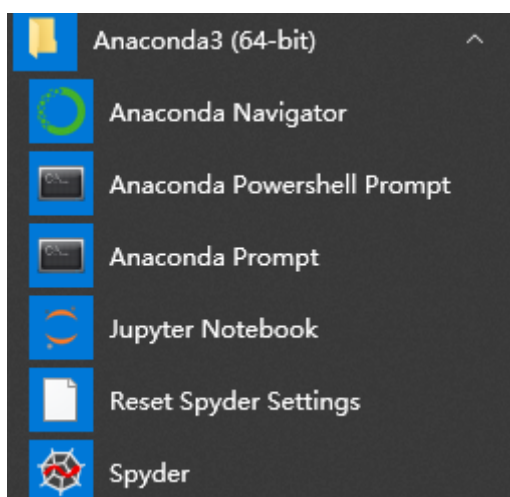
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