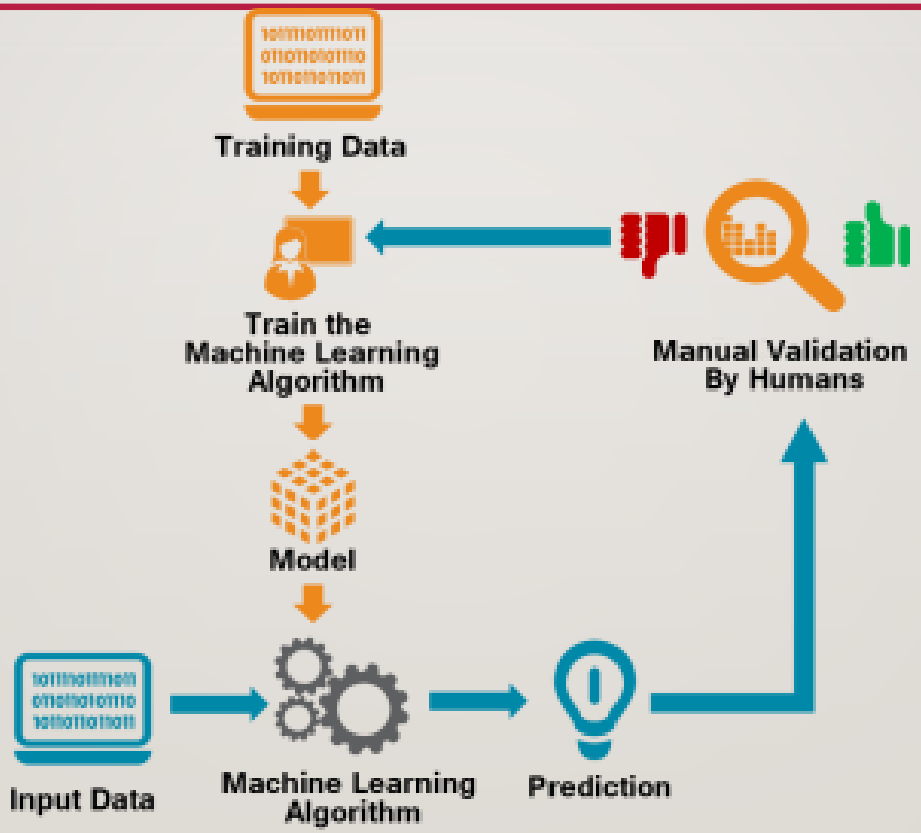
INTRODUCTION TO MACHINE LEARNING

WHY MACHINE LEARNING?

- At a very high level, machine learning is the process of teaching a computer system how to make accurate predictions when fed data.
- Develop systems that are automatically able to adapt to the environment, process the variables and produce results.
- Mimic humans and replace them in monotonous task which require certain intelligence:
  - Recognizing hand writings

MACHINE LEARNING MODEL



APPLICATIONS OF ML

PYTHON

- Python is a high-level, interpreted, general-purpose programming language. Created by Guido van Rossum and first released in 1991.
- Python interpreters are available for many operating systems.
- It supports a huge number of libraries solving a great deal of problems with greater ease.

INSTALLING PYTHON

- For Windows download the python installer from the www.python,org/downloads/windows

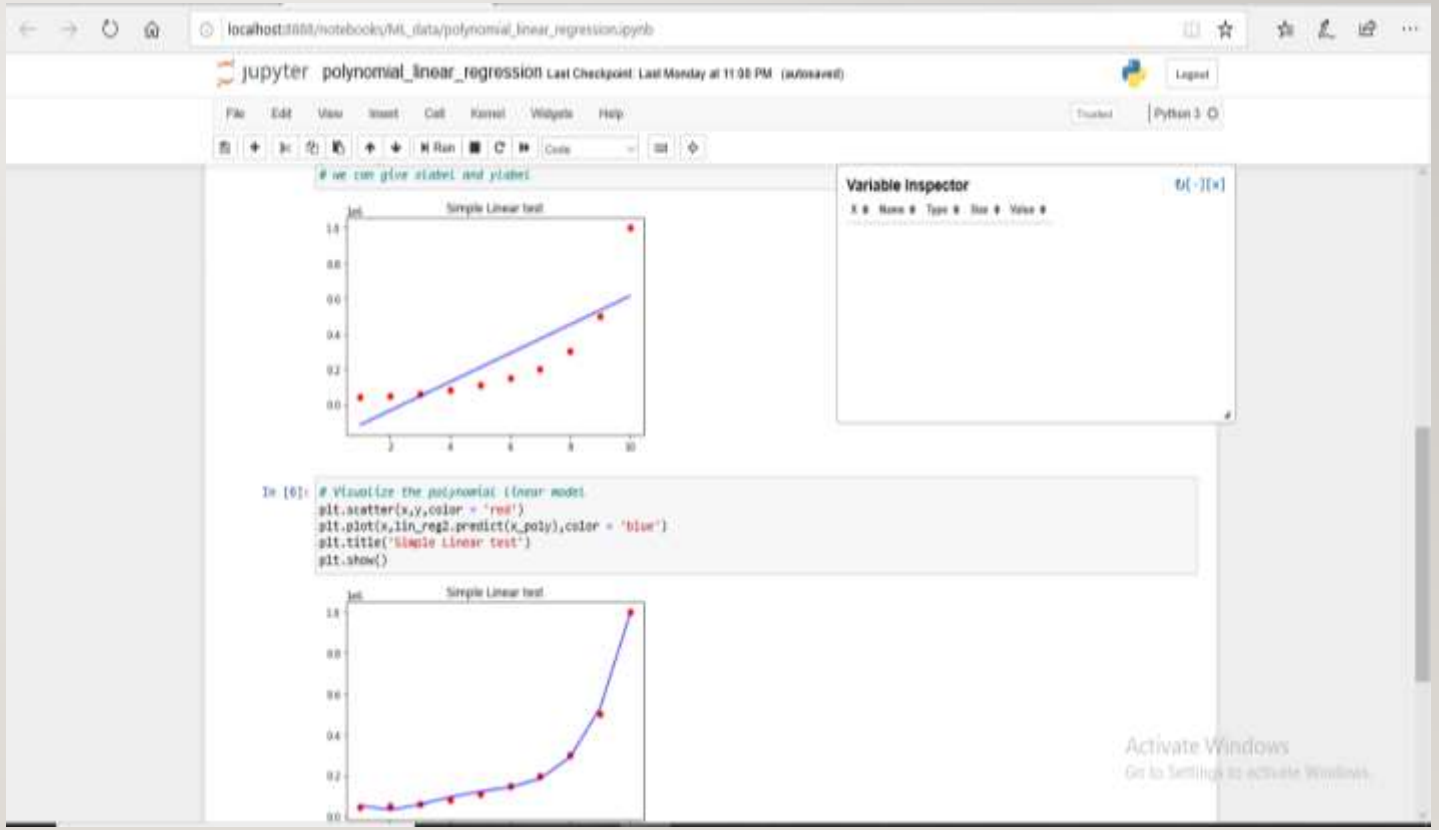
- For MAC OS:
  - https://www.python.org/downloads/mac-osx/

IMPORTANT PYTHON LIBRARY

- Numpy : pip install numpy
- Matplotlib : pip install matplotlib
- Pandas : pip install pandas
- Scikit-learn : pip install scikit-learn

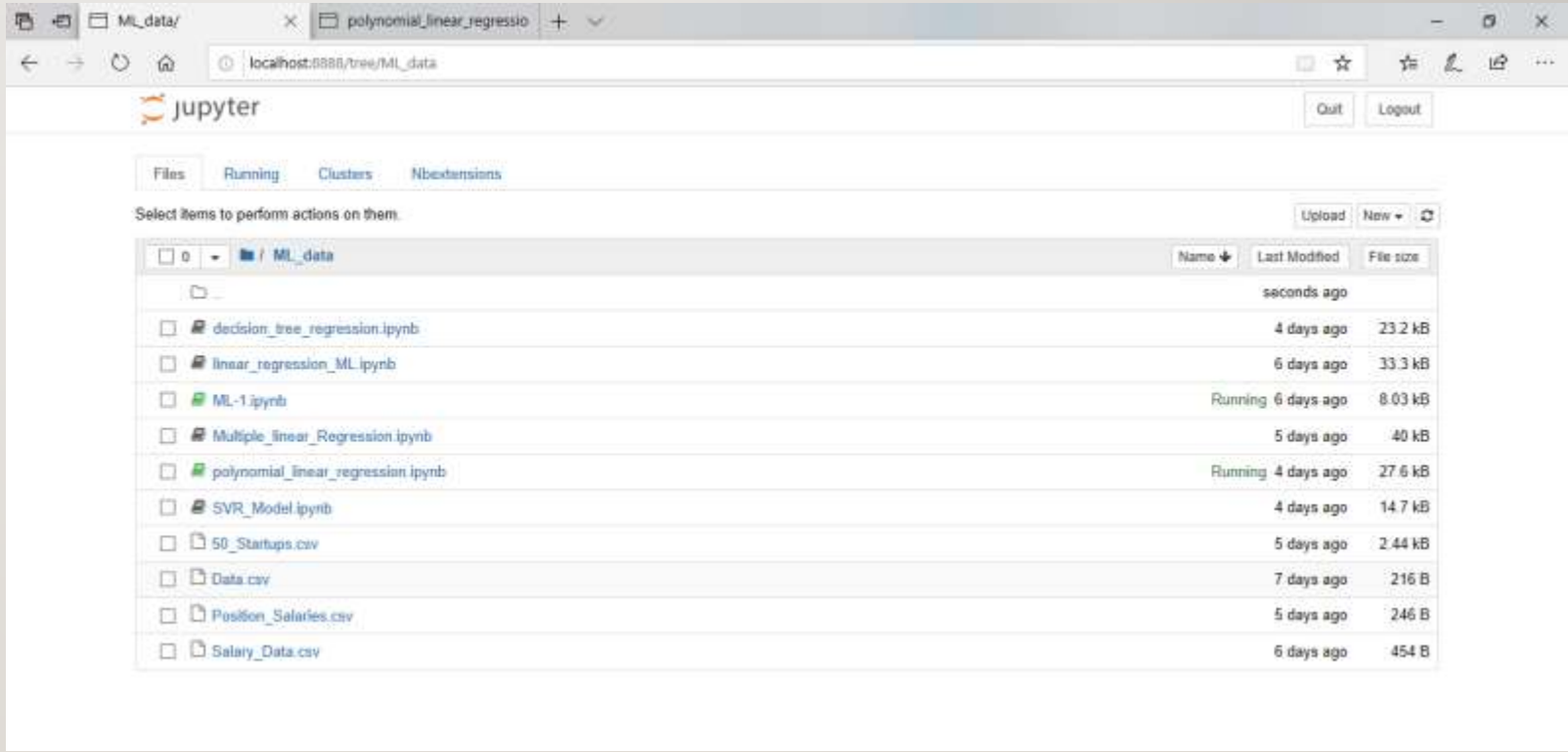
JUPYTER NOTEBOOK

- 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.
- For now, you should know that "Jupyter" is a loose acronym meaning Julia, Python, and R. These programming languages were the first target languages of the Jupyter application.



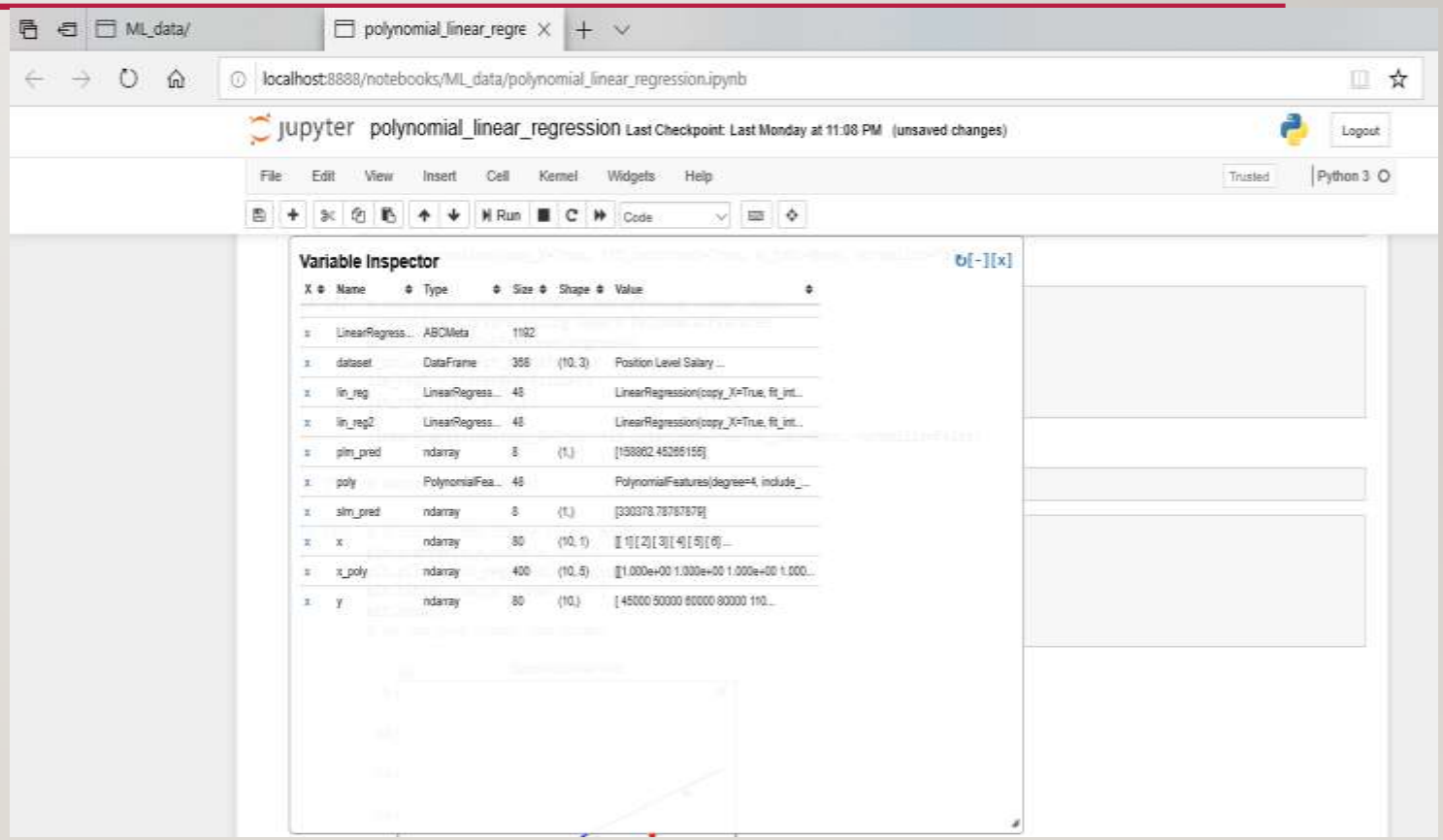
INSTALLING JUPYTER NOTEBOOK

- pip3 install --upgrade pip
- pip3 install jupyter
- To run jupyter notebook:
- Jupyter notebook

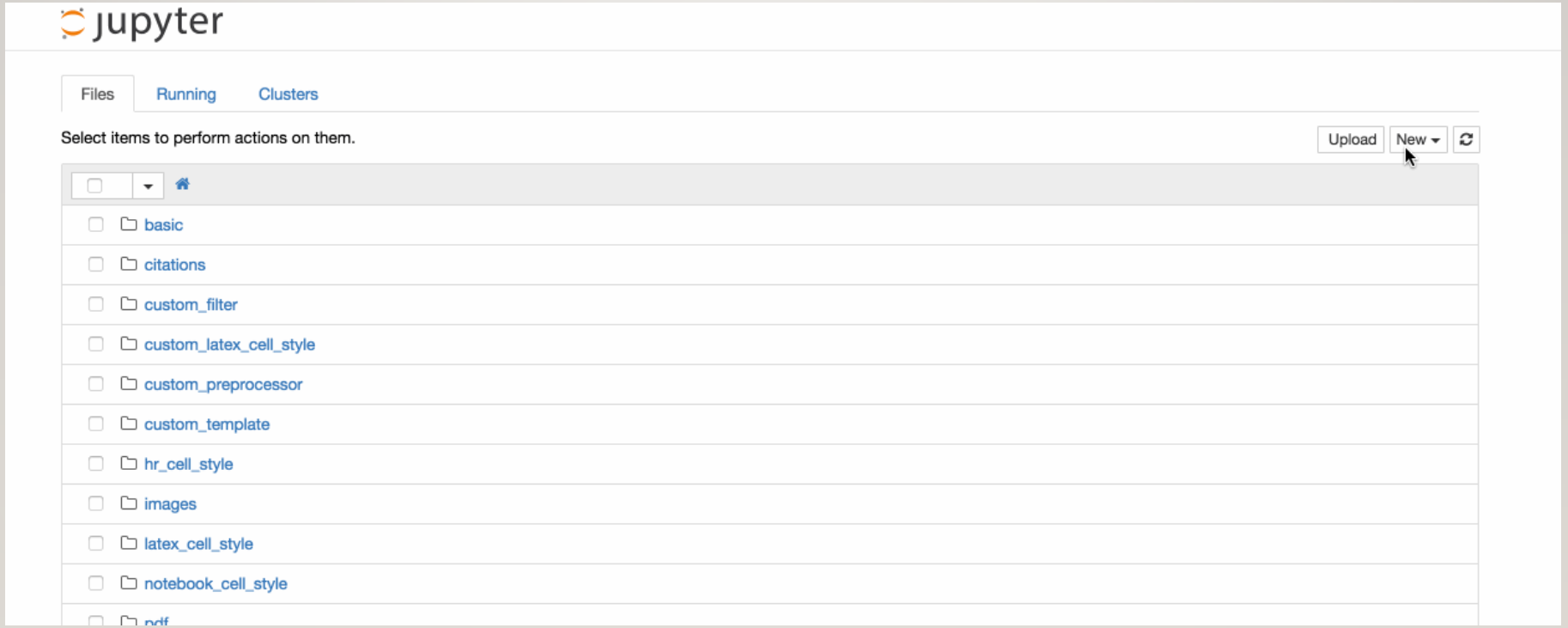


ADDING VARIABLE INSPECTOR

- pip install jupyter_contrib_nbextensions
- jupyter contrib nbextension install –user
- jupyter nbextension enable varInspector/main



WORKBOOK IN JUPYTER



THANK YOU