Predictive Analytics using R & Python:

Installing R and RStudio –

For this tutorial, we will be using the free and open-source program R, along a user interface called RStudio. You must first download the latest version of R and install it. Then, you can download and install RStudio.

For Windows Users –

1. Open an internet browser and go to: http://www.rproject.org/
2. Click the “download R” link in the middle of the page under “Getting Started.”
3. Select a CRAN location (a mirror site) and click the corresponding link. We suggest using a location in the USA, either from Texas or the one from UCLA.
4. Click on the “Download R for Windows” link at the top of the page.
5. Click on the “install R for the first time” link at the top of the page.
6. Click “Download R for Windows” and save the executable file somewhere on your computer. Run the .exe file and follow the installation instructions.
7. Now that R is installed, you need to download and install RStudio.
8. Go to: http://www.rstudio.com/ and click on the green “Download now” button.
9. Click on “Download RStudio Desktop.”
10. Click on the version recommended for your system, or the latest Windows version, and save the executable file. Run the .exe and follow the installation instructions.

For Mac Users –

1. Open an internet browser and go to: http://www.rproject.org/
2. Click the “download R” link in the middle of the page under “Getting Started.”
3. Select a CRAN location (a mirror site) and click the corresponding link. We suggest using a location in the USA, either from Texas or the one from UCLA.
4. Click on the “Download R for (Mac) OS X” link at the top of the page.
5. Click on the file containing the latest version of R under where it says “Files.”
6. Save the .pkg file, double-click it to open, and follow the install instructions.
7. Now that R is installed, you need to download and install RStudio.
8. Go to: http://www.rstudio.com/ and click on the green “Download now” button.
9. Click on “Download RStudio Desktop.”

10. Click on the version recommended for your system, or the latest Mac version, save the .dmg file on your computer, double-click it, and then drag and drop it to your applications folder.
Once you open RStudio, please install all CRAN packages:

```
availablePackages <- available.packages()[,1]
install.packages(availablePackages)
```

Installing Anaconda Python 2.7 -

1) Please go to the this link (http://docs.continuum.io/anaconda/install#windows-install)
2) Choose your platform (OS).
3) Follow the OS specific instructions to install Python 2.7 (Anaconda).

This tutorial requires the following packages-
Python version 2.6-2.7 or 3.3-3.4
numpy - version 1.5 or later: http://www.numpy.org/
scipy - version 0.10 or later: http://www.scipy.org/
matplotlib - version 1.3 or later: http://matplotlib.org/
scikit-learn - version 0.14 or later: http://scikit-learn.org
ipython - version 2.0 or later, with notebook support: http://ipython.org
seaborn - version 0.5 or later
pandas - preferably latest

Once anaconda is installed, install miniconda :http://conda.pydata.org/miniconda.html

After installing miniconda, the following command (in terminal) will install all required packages in your Python environment:

```
$ conda install numpy scipy matplotlib scikit-learn ipython-notebook seaborn
$ conda update pandas
```

Note: on Windows, use cmd.
Anaconda comes with IPython. We'll use python 2.7 and IPython for the tutorial.

Downloading Code from Github:
For this tutorial, I have uploaded sample data and scripts in Github. I would be going over these examples in detail. If you want, you can install Github, but its not necessary for this tutorial. You must download the data and the code from Github and better go for the zip download option. Github link would be provided during tutorial.