Data Analysis Using Python

Spring 2017

Agenda

- Syllabus
- Assignments and Project Work
- Installing required tools
- Introduction to Python

Assignments & Projects

- Material uploaded before start of lecture.
- All material to be available via Github
- Assignments - Weekly / Bi-Weekly
- Submission via Github.
- Individual Projects

Tools

- **Git** - For accessing material and assignments.
- **conda** - To install python packages
- Python Packages
  - **IPython - Interactive Shell**
  - **Jupyter - GUI based notebook**
  - **Numpy - ndArray**
  - **Pandas - DataFrames**
  - **Matplotlib - Plotting Library**
  - **seaborn - Statistical Plotting Library**

Installation (MacOS)

- iterm - https://www.iterm2.com/downloads.html
- Homebrew - http://brew.sh
- Git - brew install git
- zsh - https://github.com/robbyrussell/oh-my-zsh
- Anaconda - https://docs.continuum.io/anaconda/install (Install Python 3.5 only, Graphical Installer)
- Packages - $ conda install *pkg_name*

Installation (Windows)

- Git : https://git-scm.com/download/win

- Anaconda : https://docs.continuum.io/anaconda/install (Python 3.5 Graphical Installer)

- Packages - $ conda install *pkg_name*

Github

- Create a Repository - lname_fname_spring2017
- Add **brahmbhattspandan** as collaborator
- Git Tutorial : Git Real Slides
- Git commands : -
    - git add --all
    - git commit -m ‘message’
    - git push
    - git pull
    - git clone

Introduction

- Why Python ?
  - Software Quality
  - Developer Productivity
  - Program Portability
  - Support Library
  - AI and NLP

Introduction

- Who uses Python ?
  - Google
  - Youtube
  - Dropbox
  - Bittorrent
  - Maya

Introduction

- Use of Python
  - System Programming
  - GUI development
  - Internet Scripting
  - DB Programming
  - Numeric & Scientific Computing
  - AI

Hello World

- print(“Hello World.”)
- print(2*5)
- Save as .py file :
  - vi myfile.py
  - python my file.py