* Course Overview
* Course Introduction
  + Data Science: set of fundamental principles that guide the extraction of knowledge of data
  + Kaggle: data science competition
* Target Audience
* Course Prerequisite
* Data Science Project Cycle O…
  + Extract data
  + Organize data
  + Analyze and create models
  + Present
* Why Python for Data Science
  + Easy and intuitive
  + Tools and libraries
  + Active community
  + Scalability and fast
  + Production python based application stack
* Course Outline
  + Set up environment
  + Python distributions
  + Jupyter notebook
  + Data science project template
  + Versioning
  + Extracting data
    - Databases
    - Apis
    - Web scraping
    - Titanic dataset
    - Database connectors
    - Requests
    - Beautiful soup
  + Basic exploratory data analysis
  + Numpy
  + Panda
  + Advanced exploratory data analysis
  + Data munging(identifying issues)
  + Feature engineering
  + Visualization
  + Matplotlib
  + Machine learning
  + Build and evaluate models
  + Kaggle submission
  + Scikit-learn
  + Model tuning
  + Model persistence
  + Machine learning API
  + Pickle library
  + Flask library
* Summary
* Introduction
* Overview
  + Python distributions
  + Jupyter notebook
* Python Distributions for Data ..
  + Option 1
    - Base python
    - Then install packages one by one
  + Option 2
    - Specialized python distributions
    - Comes with preinstalled and optimized python packages
  + Python distributions for Data Science
    - Anaconda
    - Enthought canopy
* Python 3.x vs Python 2.x
  + Python 3.x
    - Clean & faster
    - Future
  + Python 2.x
    - Stable third-party packages
    - Better community support
    - Backward compatibility
* Demo: Installing Anaconda D…
  + Download installer at anaconda.com
  + Open terminal
    - Type ‘python --version’
    - Type ‘pip list’ to see install packages
    - Type ‘conda list’ to packages in anaconda distribution
* Jupyter Notebook
  + Formerly know as IPython notebook
  + Combine code block, human-friendly text, images, videos in a single document
  + Run in web browsers
  + Support different kernels
  + Viewed with nbviewer(also in github)
  + Export to various formats such as pdf
* Demo: Setting up Jupyter Not..
  + Use terminal
    - Make folder
    - Navigate to folder
    - Type ‘jupyter notebook ‘ to launch jupyter note book server on your local machine
* Demo: Jupyter Notebook - Ba…