### Python

1. [Codecademy – Python](https://www.codecademy.com/learn/python)
2. [Learn Python the Hard Way](http://learnpythonthehardway.org/)
3. [Intro to Computer Science – Build a Search Engine](https://www.udacity.com/course/intro-to-computer-science--cs101)
4. [Programming Foundations with Python - Learn Object-Oriented Programming](https://www.udacity.com/course/programming-foundations-with-python--ud036)
5. [My code isn't working](http://www.tecoed.co.uk/uploads/1/4/2/4/14249012/624506_orig.png) is a great flowchart explaining how to debug Python errors  
   *Advanced Topics*
6. If you want to understand Python at a deeper level, Ned Batchelder's [Loop Like A Native](http://nedbatchelder.com/text/iter.html) and [Python Names and Values](http://nedbatchelder.com/text/names1.html) are excellent presentations.

## Programming

1. [UCBerkeley CS61A (python)](https://www.youtube.com/playlist?list=PL-XXv-cvA_iBM29DgZsGaQihJp8lLQn3J)
2. [UCBerkeley CS61B (java)](https://www.youtube.com/playlist?list=PL-XXv-cvA_iDD4nnsfVIqPFORTgZi9xRp)

## Command Line

1. [Codecademy – Learn the Command Line](https://www.codecademy.com/learn/learn-the-command-line)
2. [Linux Command Line Basics - Getting Started with the Shell](https://www.udacity.com/course/linux-command-line-basics--ud595)

## Version Control

1. [How to Use Git and GitHub - Version Control for Code](https://www.udacity.com/course/how-to-use-git-and-github--ud775)

## Introductory Statistics

1. [Anscombe's Quartet - Why Summary Statistics Don't Tell the Whole Story](http://data.heapanalytics.com/anscombes-quartet-and-why-summary-statistics-dont-tell-the-whole-story/) [Reading]
2. [Intro to Statistics – Making Decisions Based on Data](https://www.udacity.com/course/intro-to-statistics--st101)
3. [Intro to Inferential Statistics - Making Predictions from Data](https://www.udacity.com/course/intro-to-inferential-statistics--ud201)
4. [Intro to Descriptive Statistics - Mathematics for Understanding Data](https://www.udacity.com/course/intro-to-descriptive-statistics--ud827)

*Advanced Topics*  
5.[An Introduction to Statistical Learning](http://www-bcf.usc.edu/~gareth/ISL/) [eBook]

6. [Bias-variance tradeoff](https://github.com/justmarkham/DAT8/blob/master/homework/09_bias_variance.md) [Reading]  
7. [Advanced Statistical Computing at Vanderbilt University Department of Biostatistics](https://github.com/fonnesbeck/Bios8366/tree/master/notebooks)

## Data Cleaning

1. [Data Wrangling with MongoDB - Data Manipulation and Retrieval [XML, JSON, APIs]](https://www.udacity.com/course/data-wrangling-with-mongodb--ud032)
2. Python Pandas, [three-part tutorial](http://www.gregreda.com/2013/10/26/intro-to-pandas-data-structures/), [introduction](https://github.com/fonnesbeck/Bios8366/blob/master/notebooks/Section2_5-Introduction-to-Pandas.ipynb), and [data wrangling](https://github.com/fonnesbeck/Bios8366/blob/master/notebooks/Section2_6-Data-Wrangling-with-Pandas.ipynb)

## Data Analysis

1. Jeff Leek's [guide to creating a reproducible analysis](https://github.com/jtleek/datasharing) [Reading]  
2. [How Software in Half of NYC Cabs Generates $5.2 Million a Year in Extra Tips](http://iquantny.tumblr.com/post/107245431809/how-software-in-half-of-nyc-cabs-generates-5-2) [Reading]

3. [Data Analysis with R – Visually Analyze and Summarize Data Sets](https://www.udacity.com/course/data-analysis-with-r--ud651)  
4. [Intro to Data Analysis - Data Analysis Using NumPy and Pandas](https://www.udacity.com/course/intro-to-data-analysis--ud170)

5. [Intro to Data Science – Learn What it Takes to Become a Data Scientist](https://www.udacity.com/course/intro-to-data-science--ud359)

6. [Coursera Data Science Course](https://www.coursera.org/course/datasci)

7. [Harvard's Data Science course](http://cs109.github.io/2014/) – CS109

## Machine Learning

1.[Getting In Shape for The Sport Of Data Science](https://www.youtube.com/watch?v=kwt6XEh7U3g) [YouTube]

1. [Intro to Machine Learning – Pattern Recognition for Fun and Profit](https://www.udacity.com/course/intro-to-machine-learning--ud120)
2. [Sebastian Raschka Python for Machine Learning Tutorials](https://github.com/rasbt/pattern_classification) [Tutorials]
3. [Machine Learning – Supervised, Unsupervised & Reinforcement](https://www.udacity.com/course/machine-learning--ud262)
4. [Data Science Ipython Notebooks](https://github.com/donnemartin/data-science-ipython-notebooks) [Tutorials]