Summer Course in Data Science
Tentative Schedule

Reference 1. (SC) Scientific Computation: Python Hacking for Math Junkies (link to book: https://mycsun.box.com/v/PythonBook)

Reference 2. (GSML): Getting Started in Machine Learning (link to book: https://mycsun.box.com/v/getting-started-in-ML-book)

Day	Topics Covered	Reading Material
1	Intensive Python: shell programming, installing Anaconda, Jupyter notebooks, identifiers, expressions, types, simple expresions, types, lists, tuples, strings, functions, for loops	SC: 1-6, 10-12, 14-16, 18,19
2	Intensive Python: while loops, list comprehension, numpy, basic i/o, basic matplotlib, basic pandas, dictionaries, classes	SC: 13, 21-25,
3	Linear and Multinlinear Regression	GSML 1, 2
4	Stepwise, Ridge, Lasso, Nonlinear Regression, Optimization	GSML 4, 5, 6
5	Polynomial and Spline Regression	GSML 3, 7, 8
6	Logistic Regression, Evaluation of binary classification, ROC curves	GSML 10, 11
7	Naive Bayes, KNN, LDA, QDA	GSML 13, 14, 15
8	Classification and Regression Trees, Boosting, Bagging, Random Forests	GSML 9, 18, 19
9	Neural Networks	GSML 12
10	PCA, SVM	GSML 16, 17
11	Summary of Classification and Clustering Methods.	GSML 20, 21
12	Introduce Kaggle Projects and Students Work on Kaggle Projects	
13	Students Work on Kaggle Projects	
14	Students Present Projects to Class	