**Getting into Data Science using Python**

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Introduction to Data Science

1. What is Data Science, Machine Learning, AI
2. A brief history
3. Supervised Learning
4. Unsupervised Learning
5. Perceptron
6. Classification vs Clustering vs Regression Problems
7. More about classification algorithms – KNN, Decision Trees and Random Forest
8. How to select algorithm
9. Bias vs Variance Trade off

Python Programming

1. Basic data types
2. Control flow statements
3. Functions
4. Classes and Objects
5. List, Tuples and Dictionaries
6. Basics of numpy, pandas, matplotlib and sklearn
7. Error Handling
8. Sneak Peak into Deploying ML solutions – Just an overview (installations, packaging, flask, dockers, cloud)

Data Science Using Python

1. Understanding a problem statement
2. Performing Exploratory Data Analysis
3. Feature Exploration
4. Algorithm
5. Analysis of Results and Presentation

Pre-requisites

1. A working laptop with windows/linux (must)
2. A Google Colab account (must)
3. Anaconda with Python 3.6 installed
4. If installing Python without conda, please ensure the installation of libraries mentioned in course.
5. Any editor of choice (Jupyter,spyder,pycharm,VSCode,notepad ++, sublime,vim,nano)
6. If numpy/scipy/pandas is not working, please install Visual C++ compiler.

Pre-reads

1. Books : Patter Recognition and Machine Learning by Bishop
2. Youtube: <https://www.youtube.com/playlist?list=PLQVvvaa0QuDe8XSftW-RAxdo6OmaeL85M>