

Data Analytics and Machine Learning using Python

- **Data Analytics using Python**
 - What is Anaconda distribution
 - Using Anaconda
 - Introduction to Jupyter Notebooks
 - Working with Jupyter Notebooks
 - NumPy
 - Introduction to NumPy
 - NumPy Arrays, indexing and slicing
 - NumPy operations
 - Pandas
 - Introduction to Pandas
 - DataFrames
 - Operations
 - Missing Data
 - Aggregation and Grouping
 - Merging Joining and Concatenating
 - Data Input and Output
 - matplotlib (Visualization)
 - Introduction to Matplotlib
 - Using Matplotlib
 - Line Plot
 - Scatter Plot
 - Histogram and Binning
 - Seaborn (Visualization)
 - Introduction to Seaborn
 - Distribution Plots
 - Categorical Plots
 - Matrix Plots
 - Regression Plots
 - Grids
 - Style and Colors

Machine Learning Algorithms

- **Machine Learning**
 - Introduction to Machine Learning
 - Supervised and Unsupervised learning
 - Machine Learning with Python
 - Introducing Scikit-Learn
 - Data representation in Scikit-Learn
 - Data as table
 - Feature Matrix
 - Target Array
 - Scikit-Learn's Estimator API
- **Linear Regression**
 - What is Linear Regression
 - Simple Linear Regression
 - Linear Regression with Python
- **Logistic Regression**
 - What is Logistic Regression
 - Logistic Regression with Python
- **Decision Trees and Random Forests**
 - Introduction to Tree Methods
 - Decision Trees and Random Forest with Python
- **Support Vector Machines**
 - Introduction to Support Vector Machines
 - Support Vector Machines with Python
- **K-Means Clustering**
 - Introduction to K-Means
 - K-Means Algorithm
 - K-Means with Python
- **Principal Component Analysis**
 - Introduction to Principal Component Analysis (PCA)
 - Principal Component Analysis with Python
- **Neural Networks, Deep Learning and TensorFlow**
 - Introduction to Neural Networks
 - Introduction to Deep Learning
 - Introduction to TensorFlow
 - TensorFlow Basics
 - MNIST with Multi-Layer Perceptron