

Contents

Below are the topics we are going to cover in this course:

- Module 1 : Introduction to Python (2 sessions)
 1. Introduction
 2. Variables and types
 3. List
 4. Tuple and dictionary
 5. Functions and packages
 6. Numpy
 7. Pandas
 8. SQL in python
- Module 2 : Exploratory Data Analysis (1 session)
 1. EDA for Regression
 2. EDA for Classification
- Module 3 : Machine Learning : Data Preprocessing (1 session)
 1. Data Preparation and cleaning
 2. Feature Engineering
- Module 3 : Supervised Learning : Regression & Classification (3 sessions)
 1. Regression
 - Linear and Multiple regression
 - Evaluating Regression Model
 2. Classification
 - Logistic Regression
 - Evaluating Classification Model
 3. Improving model performance
 - Cross validation
 - Regularization
 - Feature selection
 - Hyper parameter tuning
 - Dimension reduction
 - Creating model pipeline and pickle for deployment
- Module 4 : Machine Learning algorithms (2 sessions)
 - Decision Tree
 - K-nearest neighbor
 - SVM
 - Bayesian models
 - Ensemble models : Random forest, Gradient boosting, XGboost
 - Regression template
 - Classification template
- Module 5 : Unsupervised Learning : Clustering (1 session)
 - K-Means clustering
 - Hierarchical Clustering
- Module 7 : Unsupervised Learning : Association Learning (1 session)
 - Recommendation problem
- Module 8 : NLP (1 session)
 - Introduction to NLP
- Module 9 : Introduction to Deep Learning : DNN and CNN (2 session)
 - Deep Neural network : Classification problem
 - CNN : Image classification
- Module 9 : Case study (2 sessions)

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