Data Science

Statistical Essentials

Exploratory Data Analysis:

- Data Sourcing
- Data Cleaning
- Univariate Analysis
- Segmented Univariate
- Bivariate Analysis
- Derived Metrics

Case Study (In Lecture)

- Case study demo

Inferential Statistics

- Basics of probability
- Discrete probability distribution
- Continuous probability distribution.
- Central Limit Theorem
- Application of sampling modeling.

Hypothesis Testing

- Concepts of Hypothesis Testing – I
- Concepts of Hypothesis Testing – II

Python (ML Part)

Packages

- Numpy
- Pandas
- Jupyter Notebook (Colab)
- Plotting Graphs
- SCIKIT – Learn

Tensorflow / Pytorch

- Intro
- 1.0 vs 2.0
- Neural Networks using Tensorflow

Machine Learning Model

- Linear Regression
- Multi Linear regression
- Model Selection
- Naïve Bayes
- PCA
- Polynomial Regression
- Decision Tree Regression
- Random Forest Regression
- Logistic Regression
- KNN
- SVM/SVC
- Decision Tree Classification
- Naïve Bayes
- Random Forest Classification

Deep Learning

- K Means
- CNN
- Neural networks
- Recurrent neural networks
- Hierarchical Clustering

NLP

- Text Classification
- NLP / NLTK
- Segmentation and tokenization
- Stemming and lemmatization
- POS – parts Of speech

Excel

- Excel will be covered in EDA for processing and analysis.

Power BI

SQL

Project