**Data Science**

1) OVERVIEW OF ANALYTICS

* Scales of Data Measurement
* Descriptive Statistics : Mean, Median, Mode, Variance …
* Probability Distribution and Sampling

2) HYPOTHESIS TESTING

* Z-test,T-test, Anova
* Chi-Square test

3) BASE PREDICTIVE MODELLING

* Correlation and Covariance
* Linear Regression
* Logistic Regression

4) CLUSTERING

* Cluster Analysis : Group data, form clusters that contain objects similar to each other in a group as compared to those in other clusters
* Factor Analysis : Identify few underlying factors from a large set initial set of observed variables

5) ADVANCE PREDICTIVE MODELLING

* Naive Bayes
* SVM
* GBM and Adaptive Boosting
* Decision Tree and Random Forest
* Cross Validation and Parameter Tuning
* Model Explainability
* Association Analysis/Market Basket Analysis

**PYTHON**

1. Introduction to Python
2. The Basics

* Arithmetic Operations
* Lists
* Strings
* Dictionaries
* DataFrame
* Control Flow
* Functions

3) Plotting Data

* Plotting Functions using Matplotlib module
* Bar Plots
* Histograms and Density Plots
* Line Plots
* Scatter Plots

4) Pandas

* Introduction to pandas Data Frame
* Essential Functionality
  + Indexing, selection, and filtering
  + Function application and mapping
  + Sorting and ranking
* Summarizing and Computing Descriptive Statistics
  + Mean, Median, Mode, Variance..
  + Correlation and Covariance
  + Unique Values, Value Counts
  + Handling Missing Data

5) Data wrangling: clean, transform, merge, reshape

* Combining and Merging Data Sets
* Reshaping and Pivoting
* Data Transformation
  + Removing Duplicates
  + Transforming Data Using a Function or Mapping
  + Replacing Values
  + Detecting and Filtering Outliers
  + Random Sampling
  + Dummy Variables

7) Data aggregation and group operations

* Data Aggregation using descriptive statistics
* Pivot tables and Cross-tabulation

**SQL - Structured Query Language**

* Fundamentals to SQL and Installation
* Creating Tables - modifiers, altering table
* Retrieving Data – SELECT
* Aggregating Data using Functions
* Subqueries - retrieving data with conditions
* JOINS

**POWER BI**

* Introduction to Power BI
* Power BI Desktop and Data Transformation
* Data Analysis Expressions (DAX)
* Data Visualization

**Statistics for Economics Class 11**

* [Chapter 1 Introduction](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-1/)
* [Chapter 2 Collection of Data](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-2/)
* [Chapter 3 Organisation of Data](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-3/)
* [Chapter 4 Presentation of Data](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-4/)
* [Chapter 5 Measures of Central Tendency](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-5/)
* [Chapter 6 Measures of Dispersion](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-6/)
* [Chapter 7 Correlation](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-7/)
* [Chapter 8 Index Numbers](https://www.learncbse.in/statistics-for-economics-class-11-notes-chapter-8/)

**Mathematics Class 11**

* [Chapter 1 Sets](https://www.learncbse.in/cbse-maths-solutions-class-11th-chapter-1-sets/)
* [Chapter 2 Relations and Functions](https://www.learncbse.in/ncert-class-11-solutions-maths-chapter-2-relations-functions/)
* [Chapter 3 Trigonometric Functions](https://www.learncbse.in/cbse-free-ncert-solutions-for-class-11th-maths-chapter-3-trigonometric-functions/)
* [Chapter 4 Principle of Mathematical Induction](https://www.learncbse.in/ncert-solutions-class-11th-maths-chapter-4-principle-mathematical-induction/)
* [Chapter 5 Complex Numbers and Quadratic Equations](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-5-complex-numbers-and-quadratic-equations/)
* [Chapter 6 Linear Inequalities](https://www.learncbse.in/free-ncert-solutions-for-class-11th-maths-chapter-6-linear-inequalities/)
* [Chapter 7 Permutation and Combinations](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-7-permutation-and-combinations/)
* [Chapter 8 Binomial Theorem](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-8-binomial-theorem/)
* [Chapter 9 Sequences and Series](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-9-sequences-and-series/)
* [Chapter 10 Straight Lines Exercise 10.1](https://www.learncbse.in/free-ncert-solutions-class-11th-maths-chapter-10-straight-lines/)
* [Chapter 11 Conic Sections](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-11-conic-sections/)
* [Chapter 12 Introduction to Three Dimensional Geometry](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-12-introduction-to-three-dimensional-geometry/)
* [Chapter 13 Limits and Derivatives](https://www.learncbse.in/ncert-solutions-class-11-maths-chapter-13-limits-derivatives/)
* [Chapter 14 Mathematical Reasoning](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-14-mathematical-reasoning/)
* [Chapter 15 Statistics](https://www.learncbse.in/ncert-solutions-class-11th-maths-chapter-15-statistics/)
* [Chapter 16 Probability](https://www.learncbse.in/ncert-solutions-for-class-11th-maths-chapter-16-probability/)

**Mathematics Class 12**

Part 1

* Chapter 1 Relations and Functions
* Chapter 2 Inverse Trigonometric
* Chapter 3 Matrices
* Chapter 4 Determinants
* Chapter 5 Continuity
* Chapter 6 Application of Derivatives

Part 2

* Chapter 1 Integrals
* Chapter 2 Application of Integrals
* Chapter 3 Differential Equations
* Chapter 4 Vector Algebra
* Chapter 5 Three Dimensional Geometry
* Chapter 6 Linear Programming
* Chapter 7 Probability