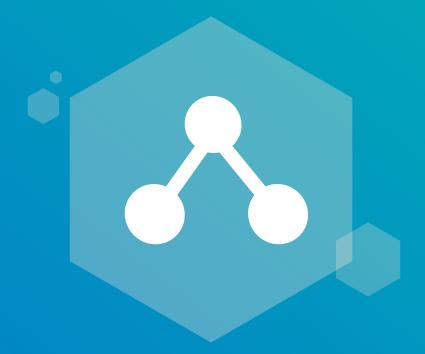


# Machine Learning Basic Level Course



Detailed Course Syllabus



## 1. ML | Machine Learning Understanding

- a. What is Machine Learning
- b. Data in Machine Learning
- c. Installation of Anaconda
- **d.** Working of Jupyter Notebook

## 2. ML | Handling Data

#### a. Numpy

- i. **Numpy -** Creating Numpy Array
- ii. **Numpy -** Array Dimensions
- iii. **Numpy -** Reversing Rows and Columns
- iv. **Numpy -** Specific Element Extraction
- v. **Numpy -** Basic Statistics
- vi. **Numpy -** Reshaping and Flattening
- vii. **Numpy -** Random Arrays and Sequences
- viii. Numpy Unique Items and Count

#### b. Pandas

- i. **Pandas -** Working of DataFrames
- ii. **Pandas -** Working on CSV
- iii. Pandas Missing Values
- iv. **Pandas -** Statistics

#### c. Matplotlib

- i. **Matplotlib -** Line Graph and Scatter Plot
- ii. Matplotlib Bar Graph
- iii. Matplotlib Bubble Graph and Pie Chart
- d. Categorical data
- e. Data Scaling Intuition
- f. Data Scaling
- g. Data Splitting Intuition
- h. Data Splitting
- i. Handling Missing Data



## 3. ML | Regression

#### a. Linear Regression

- i. Linear Regression Intuition 1
- ii. Linear Regression Intuition 2
- iii. Linear Regression Scratch Part 1
- iv. Linear Regression Scratch Part 2 Forward Propagation
- v. Linear Regression Scratch Part 3 Cost Function
- vi. Linear Regression Scratch Part 4 Gradient Descent
- vii. Linear Regression Scratch Part 5 Training Linear Regression Model and Predicting
- viii. Linear Regression using sklearn

#### b. Polynomial Linear Regression

- i. Polynomial Linear Regression Intuition
- ii. Polynomial Linear Regression Hands-On

#### c. Support Vector

- i. Support Vector Regressor Intuition
- ii. Support Vector 2 Kernels
- iii. Support Vector Regression Code

#### d. Decision Tree

- i. Decision Tree Intuition
- ii. Decision Tree Code

#### e. Random Forest

- i. Random Forest Intuition
- ii. Random Forest Code

### 4. ML | Classification

#### a. Logistic Regression

- i. Logistic Regression Intuition
- ii. Logistic Regression Code

#### b. K-Nearest Neighbor

- i. K-Nearest Neighbor Intuition
- ii. K-Nearest Neighbor Code

#### c. Naive Bayes

- i. Naive Bayes Intuition
- ii. Naive Bayes Code



#### d. Decision Tree

- i. Decision Tree Intuition
- ii. Decision Tree Code
- e. Random Forest

## 5. ML | Clustering

#### a. K-Means Algorithm

- i. K-Means Intuition
- ii. K-Means Elbow Method
- iii. K-Means Code

#### b. Agglomerative Algorithm

- i. Agglomerative Intuition
- ii. Agglomerative Dendrogram
- iii. Agglomerative Code

## 6. ML | Data Dimensionality

#### a. Feature Selection

- i. Feature Selection Correlation Matrix
- ii. Feature Selection ExtraTreeClassifier
- iii. CHI Square Test
- iv. Feature Selection KBest Method

#### b. K-Fold

- i. K-Fold Intuition
- ii. K-Fold Code
- c. Principal Component Analysis (PCA)
- d. t-distributed Stochastic Neighbor Embedding (TSNE)

## 7. ML | Association Mining

- a. Association Rule Mining Intuition
- **b.** Apriori Code 1
- c. Apriori Code 2



## 8. ML | Natural Language Processing

- a. NLP Intuition
- **b.** NLP 1
- **c.** NLP 2
- **d.** NLP 3