SarLakG Technologies

Data Science with R & Python

Course Content

Coding will be on R & Python

Module 1: Basic of R & Python   Duration: 10 Hrs

1. **Why R & Python?**
2. **R & Python Installation**
3. **Basics of R & Python**
4. **Package Installation**
5. **Operators in R**
6. **Data Types**
7. **Importing Data**
8. **Plots in R**
9. **Descriptive Statistics**

Module 1 : Basic Statistics   Duration : 10 Hrs

1. **Introduction to Data Science.**

2. **Data Types.**

3. **Central Tendency.**

4. **Probability.**

5. **Normal Distribution & Standardization.**

6. **Sampling Theory.**

7. **Assignments**

Module 2 : Adv. Statistics   Duration : 10 Hrs

1. **Z-Distribution & T- Distribution.**

2. **Hypothesis Testing.**

3. **Correlation Analysis.**

4. **Regression Types.**

5. **Assignments**

Module 3 : Data Mining (Supervised)   Duration : 10 Hrs

1. **Linear Regression.**

2. **Logistic Regression.**

3. **Decision Tree.**

4. **Random Forest.**

5. **K- Nearest Neighbour.**

6. **Naïve Bayes.**

7. **Assignments.**

Module 4 : Data Mining (Unsupervised) Duration : 10 Hrs

1. **Hierarchical Clustering.**

2. **K-means Clustering.**

3. **Dimension Reduction.**

4. **Random Forest.**

5. **Market Basket Analysis.**

6. **Assignments.**

Module 5: Timeseries / Forecasting Duration: 10 Hrs

1. **What is Forecasting?**

2. **Why Forecasting?**

3. **Forecasting Strategies?**

4. **Plots.**

5. **Partitioning.**

6. **Model Building.**

7. **Evaluating.**

Module 6: Project Work

1. **One Supervised Learning Project**

2. **One Unsupervised Learning Project & Dimension Reduction and Regression Project.**