Machine Learning with Python

Day-1:

Session-1

1. Introduction to python machine learning
2. Python in machine learning
3. What is machine learning?
4. Applications of machine learning Algorithms
5. Steps involved in machine learning
6. Libraries and packages
7. installation

Session-2

1. Types of Learning
   1. Concepts of learnings
   2. Supervised learning
   3. Unsupervised learning
   4. Semi supervised learning
   5. Reinforcement learning
   6. Purpose of machine learning

2. Data processing, Analysis and visualization
   1. Data processing
   2. Processing techniques
   3. Data analysis
   4. Summarizing the Dataset
   5. Data visualization
   6. Univariate plots
   7. Multivariate plots
Day-2:

Session-1

1. Training data and Test data
   1. Training data
   2. Test data
   3. Performance measures: Bias and variance
   4. Accuracy, precision and Recall

2. Techniques
   1. Classification
   2. Regression
   3. Recommendation
   4. clustering

Session-2

1. Algorithms
   1. Supervised learning
   2. Unsupervised learning
   3. Reinforcement learning
   4. List of common machine learning Algorithms
   5. Linear Regression
   6. Logistic Regression
   7. Decision tree Algorithm
   8. Support vector machines(SVM)
   9. Naïve Bayes Algorithm
   10. KNN(k-nearest neighbors)
   11. K-means
   12. Random forest
   13. Dimensionality reduction Algorithm
   14. Boosting Algorithms
   15. Gradient boosting

2. APPLICATIONS
   1. Virtual personal Assistants
   2. Traffic congestion Analysis and Predictions
   3. Automated video surveillance
4. Social media
5. Face Recognition
6. Email spam and malware filtering
7. Online customer support
8. Refinement of search engine results
9. Product Recommendations
10. Detection of online frauds