

## **ML Question Bank**

### **UNIT-1**

\_1) Define Machine Learning and Discuss the problems Machine Learning can solve

2) What is supervised Learning and Discuss Linear regression Technique with the following

Predict the value of 10 years of Experience candidate salary from the following data set

X(Exp) ---3,8,9,13,4,6,11,21,1,16

Y(Salary)- 30,57,64,72,36,43,59,90,20,83

3) Write a python program to implement simple linear regression

4) Write a Python program to implement multi regression

5) Discuss unsupervised Learning in Detail

6) Discuss Reinforcement Learning in Detail

7) Write the Differences Between supervised Learning and Unsupervised Learning

8) Explain Frame work For Developing Machine Learning Models

### **UNIT-II**

1) Find the Association Between the features using Chi-Square Analysis

Smoking Habit	Lung Disease	Lung Disease	Total
Smoker	90	60	150
Non-smoker	30	120	150
Total	120	180	300

2) Explain Wrapper Methods in machine Learning in Detail

3) Discuss Principal Component analysis and Write a Python Program to implement PCA for any Dataset

4) a) What is Dimensionality reduction Technique and Discuss Linear Discriminant Analysis in Detail

5) Discuss any four filter methods in machine learning with Example

6) Define the following Terms

a) Bias b) Variance c) Overfitting d) Underfitting e) Accuracy f) precision g) recall h) F1-Score

7) Explain forward selection and backward elimination in feature selection process

### UNIT-3

- 1) What is Classification and discuss general approach to Classification
- 2) What is Multiclass Classification and discuss the applications of Multiclass Classification
- 3) Discuss the differences among Multiclass, Multilabel and Binary Classification
- 4) Write a Python Program to implement Logistic Regression