Machine Learning - Introduction

Summary

Objective

- To have a basic knowledge of the concepts and techniques of machine learning
- To understand ML problems

ML

- Need and Importance of Machine Learning
- Learning – Types of Machine Learning
  - Supervised
  - Unsupervised,
  - Reinforcement
  - Evolutionary
  - Semisupervised
- Real time applications
- Design a Learning System
- Perspectives and Issues in Machine Learning
- Curse of dimensionality
  - overfitting-Bias-variance trade-off

Test your understanding

- Machine learning is a sub domain of ……..

Artificial Intelligence

Soft computing

Deep Learning

Fuzzy computing

Test your understanding

- The learning type related to reward and punishment is called as …….

Supervised learning

Unsupervised learning

Evolutionary learning

Reinforcement learning

Test your understanding

- Choose the algorithm without probabilistic function from the following list.

Naïve Bayes model

Hidden Markov models

Gaussian mixture models

Perceptron model

Test your understanding

- Assume plenty of data is available in the given dataset. Then the proportion of training, testing and validation data is ……
- 50:25:25
- 60:20:20
- 70:15:15
- 50:30:20

Test your understanding

- If TP=45, FP=5, FN=10 and TN=20, then the Accuracy is ……..
- 0.36
- 0.45
- 0.52
- 0.56

Test your understanding

- The process of generalization fails in learning due to ……
- Underfitting
- Overfitting
- Underfitting and overfitting
- Error