Artificial Intelligence assignment list (CSMP-305)

14/11/2024

1. K-means Clustering on the Iris Dataset

2. K-medoid Clustering on Iris dataset.

3. Apply AGNES (single linkage, complete linkage, average linkage) on Iris dataset for clustering.

4. Apply DIANA (single linkage, complete linkage, average linkage) on Iris dataset for clustering.

5. Draw decision tree using ID3 algorithm on golf playing dataset.

6. Apply CART on buy computer dataset.

7. Apply naïve Bayesian algorithm on buy computer dataset to identify class label of unknown samples.

8. Apply back propagation algorithm on sample {1,0,1} with the class label {1,0}. (Where network topology: 3-2-2-2, all biases and weights are initialized at 0)

9. Apply fuzzy c means algorithm on Boston Housing Dataset.

10. Apply perceptron for realization of logic gates. (bias = 1)

11. Apply Madeline algorithm for Bipolar XOR gates. (Weights are randomly initialized, v_0, v_1, $v_2 = 0.5$, bias values are set to 1, learning rate = 0.5, Network topology: 2-2-1)

12. Apply Madeline algorithm for variable network topology.