(A36602) MACHINE LEARNING LAB

B.Tech(CSE-AI&ML) IV Sem

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LAB EXPERIMENTS

Note: Use Open-Source Software Tools, Programming Languages (Java, Python.R. etc) to perform the experiments or to implement the Machine Learning Algorithms.

1. Write a program to implement the naïve Bayesian classifier for a sample training data set stored as a .CSV file. Compute the accuracy of the classifier, considering few test data sets.
2. Write a program to demonstrate the working of the decision tree algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.
3. Write a program to implement k-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions.
4. Write a program to implement Support Vector Machine algorithm to classify the iris data set. Print both correct and wrong predictions.
5. Apply EM algorithm to cluster a set of data stored in a .CSV file. Use the same data set for clustering using k-Means algorithm. Compare the results of these two algorithms and comment on the quality of clustering.
6. Apply Hierarchical Clustering algorithm to cluster a set of data stored in a .CSV file. Use the same data set for clustering using k-Means algorithm. Compare the results of these two algorithms and comment on the quality of clustering.
7. Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using standard Heart Disease Data Set.
8. Build an Artificial Neural Network by implementing the Backpropagation algorithm and test the same using appropriate data sets.
9. Write a program to implement AdaBoost algorithm to classify the iris data set. Print both correct and wrong predictions.
10. Perform model aggregation on MNIST digit dataset.

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