

**DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING**

**COURSE NAME: FUNDAMENTALS OF MACHINE LEARNING**

**COURSE CODE:ISE71**

1. Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file.
2. For a given set of training data examples stored in a .CSV file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples.
3. Develop a program to demonstrate the prediction of values of a given dataset using Linear regression
4. Develop a program to demonstrate the prediction of values of a given dataset using logistic regression techniques
5. Develop a program to demonstrate the working of the decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.
6. Develop 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.
7. Assuming a set of documents that need to be classified, use the naïve Bayesian Classifier model to perform this task. Calculate the accuracy, precision, and recall for your data set.
8. Develop 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.
9. Develop a program to construct Support Vector Machine considering a Sample Dataset.

1. Apply K-Means algorithm to cluster a set of data stored in a .CSV file. You can add Python ML library classes/API in the program.
2. Develop a program to implement K-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions.
3. Develop a program to Implement ANN for a sample dataset