Lab Programs

Session No	Topic	Duration
1.	Implementation of the uninformed search algorithm, Case study, Problem formulation	2 Hr
2.	Implementation of the informed search algorithm, Case study, Problem correction and reformulation	2 Hr
3.	Implementation of A* Algorithm, , finalization, Case study, Literature survey	2 Hr
4.	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. Case study Literature survey presentation.	2 Hr
5.	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, Case study design, high-level diagram, Architecture diagram finalization	2 Hr
6.	Write 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. , Case study design, low-level diagrams presentation	2 Hr
7.	Build an artificial neural network by implementing the backpropagation algorithm and test the same using appropriate datasets. Case study implementation	2 Hr
8.	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. Case study implementation	2 Hr
9.	Assuming a set of documents that need to be classified, use the naïve Bayesian classifier model to perform this task. Built-in Java classes/API can be used to write the program. Calculate the accuracy, precision, and recall for your data set. Case study implementation testing	2 Hr
10.	Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using a standard heart disease data set. You can use java/python ml library classes/API. Case study implementation changes updated testing	2 Hr
11.	Apply the EM algorithm to cluster a set of data stored in a .csv file. Use the same data set for clustering using the k-means algorithm. Compare the results of these two algorithms and comment on the quality of clustering. You can add java/python ml library classes/API in the program. Case study implementation presentation	2 Hr
12.	Write a program to implement k-the nearest neighbor algorithm to classify the iris data set. Print both correct and wrong predictions. Java/python ml library classes can be used for this problem. Case study implementation changes updated presentation	2 Hr
13.	Implement the non-parametric locally weighted regression algorithm in order to	2 Hr

	fit data points. Select the appropriate data set for your experiment and draw graphs. Case study report presentation and submission.	
14.	Write a program to implement Q Learning Algorithm.	2 Hr

Use the below link:

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