Machine Learning (20IS607)

SEE LAB EXAM

Sl. No.	Programs	Marks	CO
1.	Implement the FIND-S algorithm for finding the most specific hypothesis using the **enjoy_*sport*** dataset.	**10**	**1,2**
	Construct a decision tree based on the ID3 algorithm. Use the ***Play_Tennis*** dataset for building the decision tree and apply this knowledge to classify a new sample.	**20**	**1,2,3,4**
2.	Demonstrate the working of the Candidate-Elimination algorithm to output a description of the set of all consistent hypotheses using the **enjoy_*sport*** dataset.	**10**	**1,2**
	Perform Random Forest classification on the ***Pima Indians diabetes*** dataset.	**20**	**1,2,3**
3.	Write a program to implement the *k*-Nearest Neighbor classification algorithm on the ***Breast Cancer*** dataset and visualize the results.	**20**	**1,2,3,4**
	Demonstrate the use of the Support Vector Machine algorithm for a regression problem on the ***Iris flower*** dataset and evaluate the performance of the model.	**10**	**1,2,3,4**
4.	Demonstrate the use of the K-Means clustering algorithm on the ***Mall_Customers*** dataset. Use the elbow method to find the optimal number of clusters and visualize the clusters.	**20**	**1,2,3,4**
	Demonstrate the application of Simple Linear regression on the ***Salary*** dataset.	**10**	**1,2,3,4**
5.	Build an Artificial Neural Network by implementing the Backpropagation algorithm using the ***Churn_Modelling*** dataset and evaluate the performance of the model.	**20**	**1,2,4,5**
	Demonstrate the application of Simple Linear regression on the ***housing*** dataset.	**10**	**1,2,3,4**
6.	Write a program to implement the naïve Bayesian classifier for the ***Social_Network_Ads*** dataset. Compute the accuracy of the classifier and visualize the results.	**20**	**1,2,3,4**
	Demonstrate the application of Simple Linear regression to predict the ***stock market*** prices of any organization.	**10**	**1,2,3,4**
7.	Apply Hierarchical clustering on the ***Mall_Customers*** dataset and visualize the clusters and plot the dendrograms.	**15**	**1,2,3,4**
	Demonstrate the use of the Support Vector Machine algorithm for a regression problem on the ***Position_Salaries*** dataset and evaluate the performance of the model.	**15**	**1,2,3,4**

SEE Scheme of Evaluation

Write-Up : 10 Marks

Viva Voce: 10 Marks

Programs: 30 Marks

Total : 50 Marks