Computer Science and Engineering Department

Artificial Intelligence (UCS-411)

Lab Assignment-6

1	Create a dataset (.csv file) having following features- experience of the candidate, written score, interview score and salary. Based on three input features, HR decide the salary of the selected candidates. Using this data, KNN model build a for HR department that can help them decide salaries of the candidates. Predict the salaries for the following candidates, by executing the model (for different values of K): (a) 5 Yrs experience, 8 written test score, 10 interview score (b) 8 Yrs experience, 7 written test score, 6 interview score
2	Create a dataset (.csv file) having following features- Graduations percentage, experience of the candidate, written score, interview score and selection. Selection feature is binary in nature and contains the status of the candidate. Also store at least 25 records in this dataset. Using this data, build a Bayesian learning model for HR department that can help them to decide whether the candidate will be selected or not. Take 80% data as training data and remaining a testing data randomly. Using the built model, predict the status for the following unseen data: (a) 90 %, 5 Yrs experience, 8 written test score, 10 interview score (b) 75%, 8 Yrs experience, 7 written test score, 6 interview score Also calculate the possible classification metrics for the above cases and save these values in the .CSV file.
3	For the IRIS dataset, design a decision tree classifier. Take different percentage of training data and then observe effect on the accuracy and other quality parameters. Also note the effect of other decision tree parameters (like max depth, min_sample_spit etc.) on the performance of the model. Note: Take criterion as entropy.
4	By taking Classified Data as input, compare the performance of KNN, Bayesian Classifier and Decision Tree model. In this comparison, you can take different possible parameters of particular model. Save these output in a .csv file.