

## **kNN Classification**

You have given a credit card transaction dataset, which has 30 columns, of which 29 are features and the last one is your target. The output column has two values '0' for not fraud and '1' for fraud. You have to divide this dataset into 70%, 20%, and 10% as train, val, and test, respectively. After that, apply the kNN algorithm for  $k = 1, 3, 5, 10$ , and 15. Maintain a doc file where you can store the accuracy of the kNN algorithm along with  $k$ 's value. You have to choose a  $K$  value for which the accuracy will be maximum in the phase of testing. **"You can't use any built-in function for dataset splitting as well as model building".**

## **kNN Regression**

You have given a house price dataset of Paris, which has 17 columns, of which 16 are features and the last one is your target. The output column has infinite values, as the price of a house can be any number. You have to divide this dataset into 65%, 10%, and 25% as train, val, and test, respectively. After that, apply the kNN algorithm for  $k = 1, 3, 5, 10$ , and 15. Maintain a doc file where you can store the mean absolute error of the kNN algorithm along with  $k$ 's value. You have to choose a  $K$  value for which the error (mean absolute error) will be minimal in the phase of testing. **"You can't use any built-in function for dataset splitting as well as model building".**