GENERIC CHURN PREDICTION ENGINE-Sahana Bharadwaj

DATASET:-

1)The Dataset had two parts the training dataset and the testing dataset.

2)Training dataset had 440833 rows of data and the Test dataset has 64375 rows

3)Each dataset has the labels

i)Age

ii)Gender

iii)Tenure

iv)Usage Frequency

v)Support Calls

vi)Payment Delay

vii)Subscription Type

viii)Contract Length

ix)Total Spend

x)Last Interaction

xi)Churn

4)During preprocessing the categorical columns in both the training as well as the test data were converted to int64 using one-hot encoding and the Tenure was scaled to values between 0 and 1.

5)I have used an Artificial neural network to train the model,since it gives the freedom to determine the connections and parameters compared to other methods.

6)The ANN has 3 main layers the input,hidden and output.

7)The input layer is uses RelU activation function as it is the best in this case.

8)There are 5 hidden layers to better improve the relations.

9)The output layer uses Sigmoid activation since this is a binary classification.

10)I have used adamW optimizer instead of adam or RMSprop as it prevents overfitting.

11)I have used BinaryCrossEntropy loss function as the data is going to be classified as 0-No churning or 1-Churning.

12)In 30 epochs I was able to achieve 94%accuracy.

13)Recommendations:-Usage of AdamW optimizer proved to be an advantage in computing the accuracy.