**Demand Forecasting**

Approach:

1.Firstly I tried to get a clear understanding of the train and test data provided.

2.I tried to look out for any null values in the datasets of both training and testing csv files

3.Tried to separate the DATE column into sub columns like YEAR, DAY, MONTH format just to have much more clear understanding of the data.

4.Tried to play around the Year field by creating a new column consisting of values of current year-2021 and subtract them with the existing year field so I could have the difference in the increase of the demand over the period of 2018 to 2021.

4.Droped the unnecessary columns and made up the final data frame ready to build the model

5.But here comes the visualisation part. I have tried moth scatter plot and heat map to get all the correlations that existed in the data.

6.Applied the “ExtraTreesRegressor” model in order to find the important features in the dataset that play a crucial role in predicting the output.

7.Applied “RandomForestRegressor” model in order to fine tune the model and predict the outcomes.

8.I have used “RandomizedSearchCV” for the purpose of hyper parameter tuning and we can also use GridSearchCV also.

9.Applied the model on the test data and imported the mentioned RMSE metric to find the model score.I achieved the RMSE score of 33.255817.

10.Later applied the predict the output on the Test csv and drafted the results into a new CSV file.