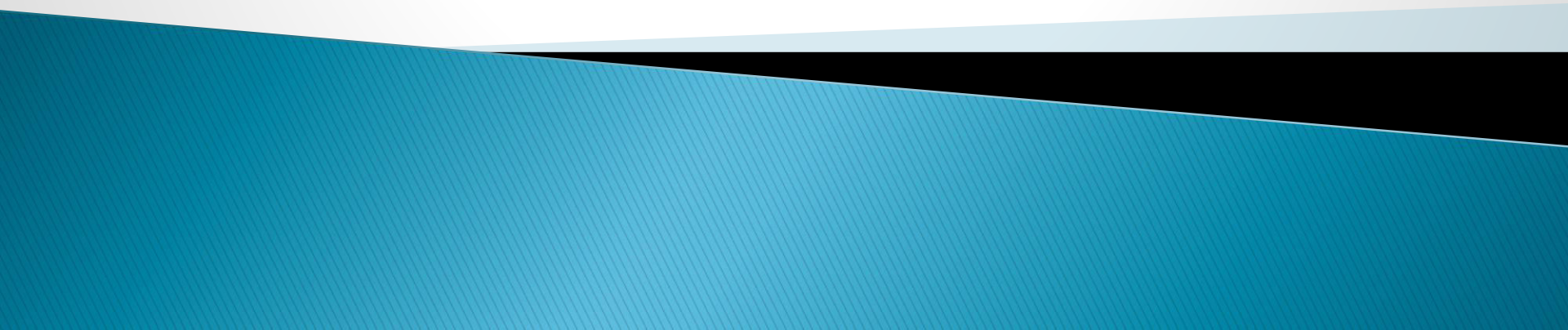


E-Commerce & Retail B2B Case Study

– Sonali Singh

Problem Statement:

- Analyze the customer transactions data to find different payment behaviours.
 - Segregate the customers based on their previous payment patterns.
 - Based on the historical data, predict the likelihood of delayed payment against open invoices from the customers.
 - Draw Business insights .
- 

Available Datasets:

Received_Payments_Data.csv:

- Past transactions data
- Data+Dictionary.xlsx
- Description of Dataset Columns
- Open_Invoice_data.csv
- Present/future Transactions data

Cluster 0 :

- regularly paying on time

● Cluster 1 :

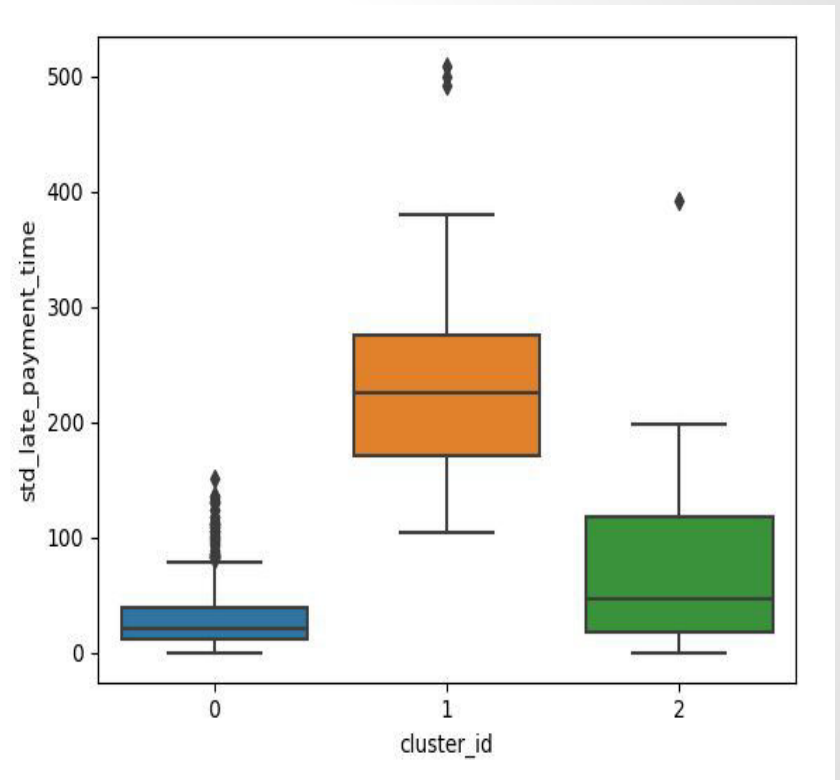
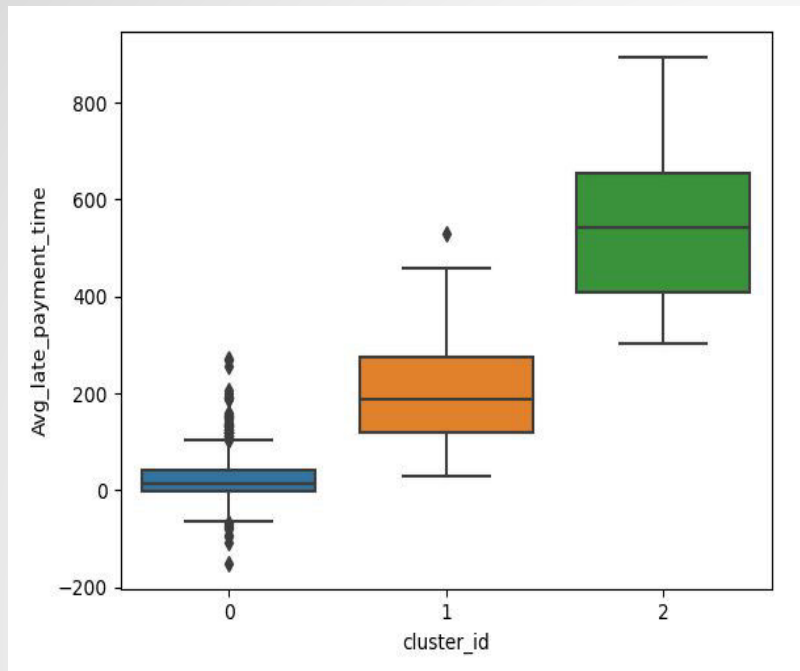
- Intermittently paying late

● Cluster 2 :

- Regularly paying late.

Clustering





Cluster 0 :

- Prime Customers

- Cluster 1 :

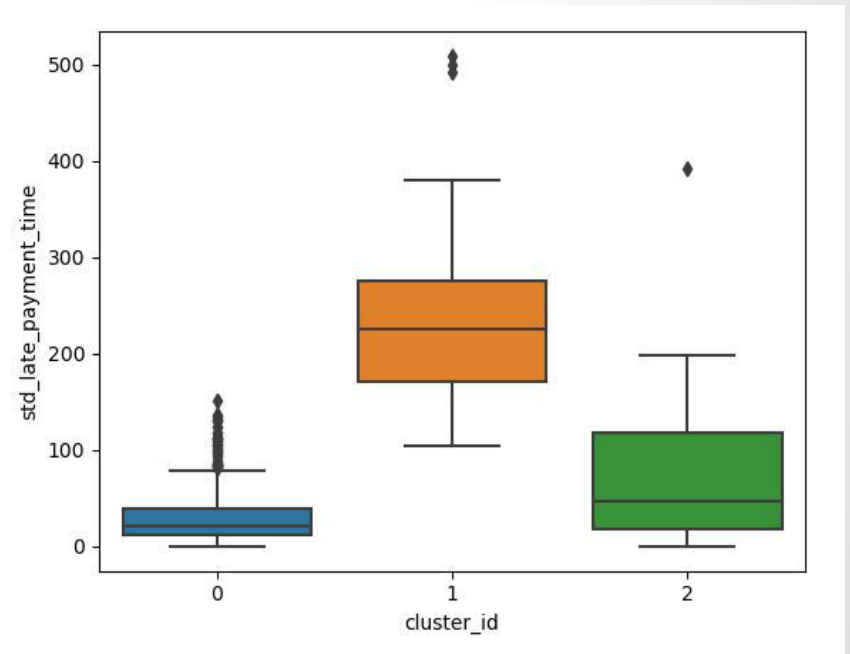
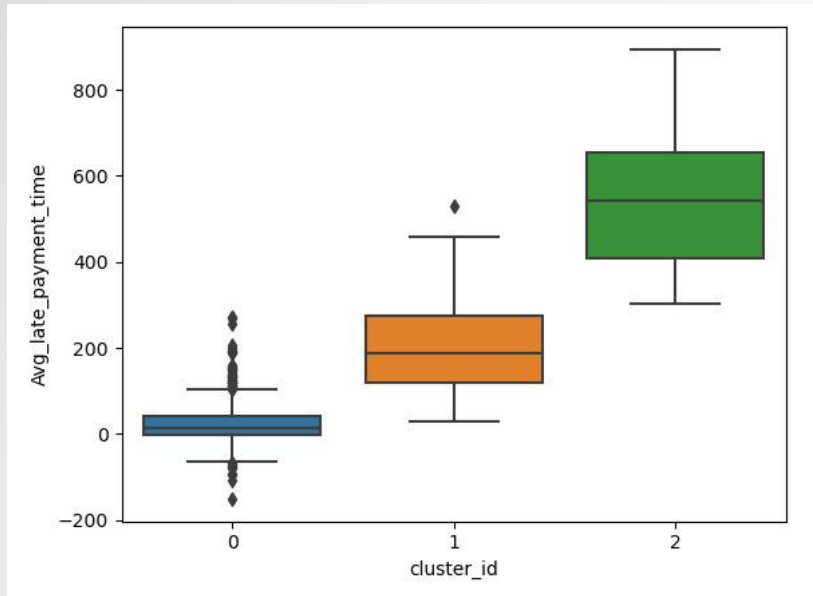
- General Customers

- Cluster 2 :

- Problematic Customers

#Clustering



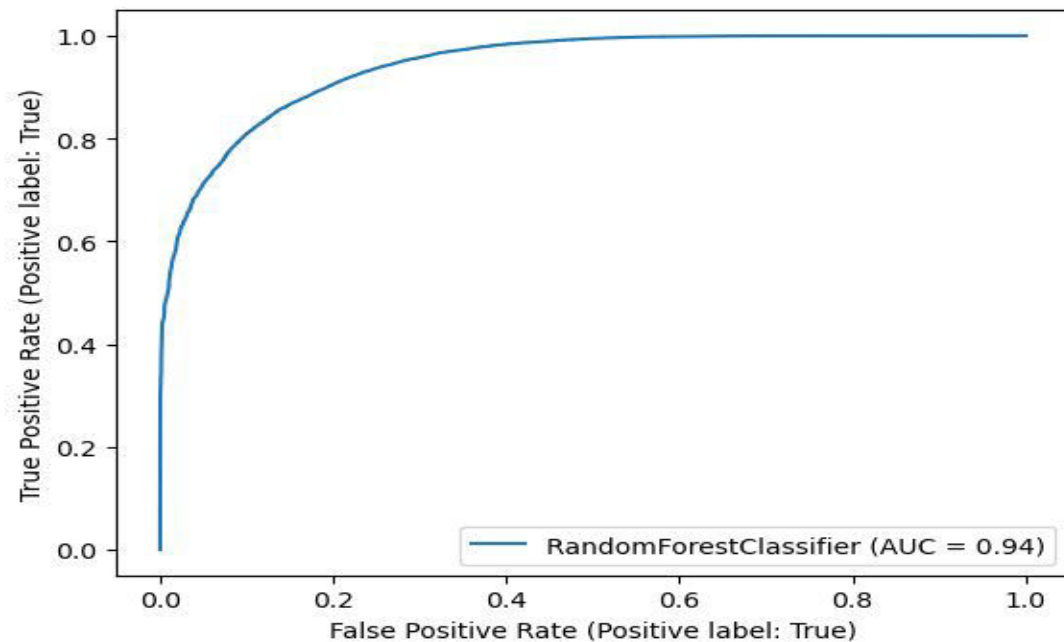


The Random Forest model was built using following parameters:

- Payment_term_days
- USD Amount

cross-validated accuracy : 82 %
Accuracy of model = ~ 84%

Random forest
model:



The Logistic regression model was built using following parameters:

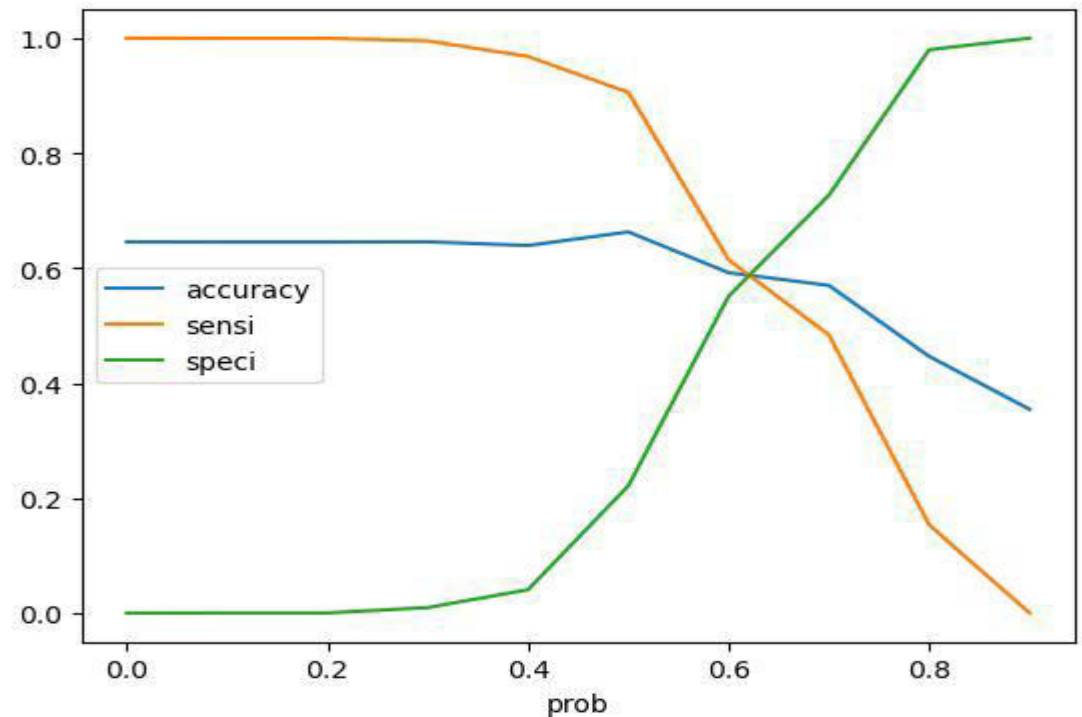
- Payment_term_days
- USD Amount

Training Accuracy : 66 %

Test Accuracy = ~ 65%

Logistic
Regression Model:

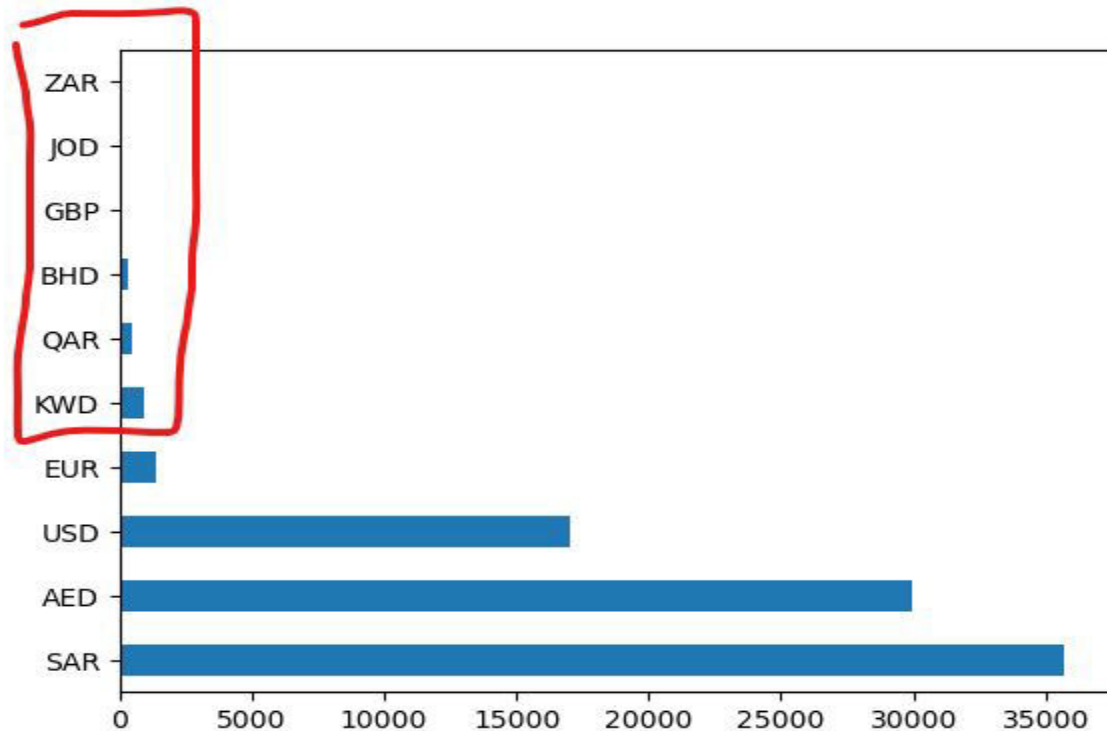
CHOSEN CUTOFF : 0.5

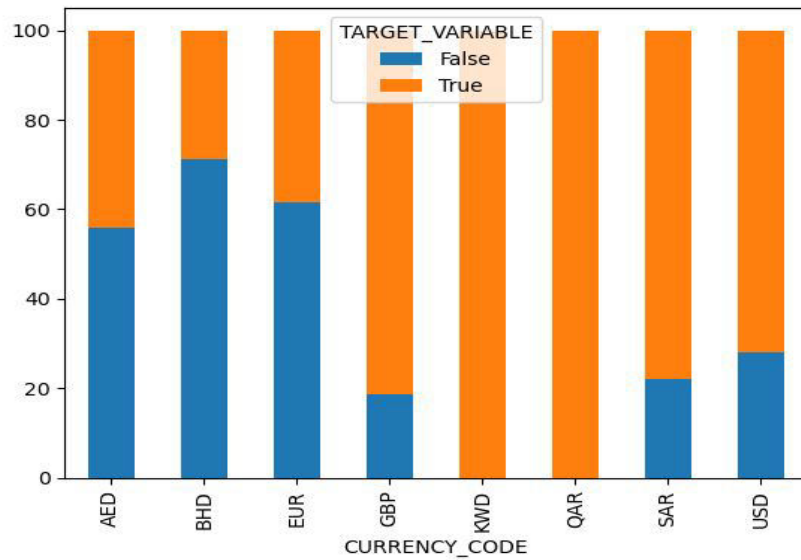


Insights:

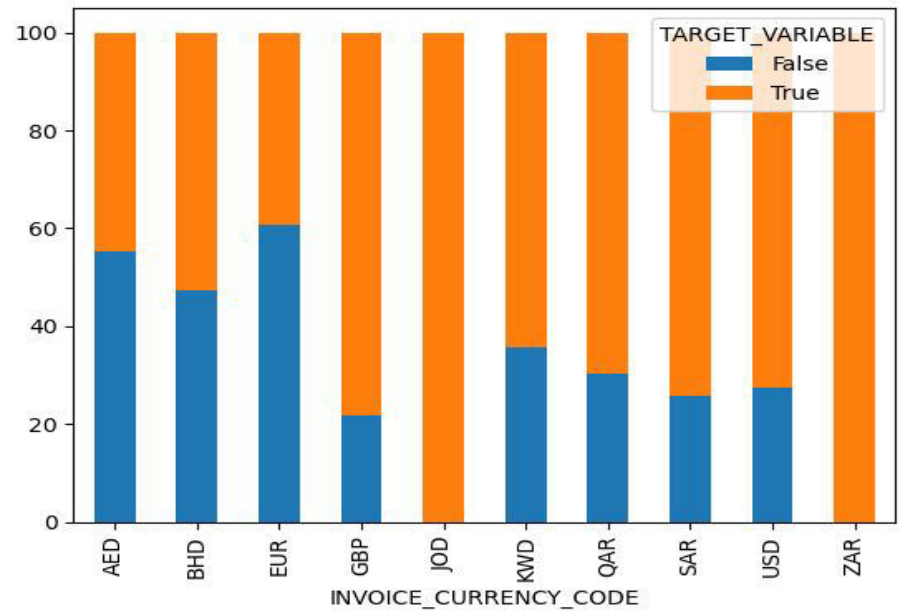
Less common currencies are associated with higher late payment rates.

Action : investigate whether there is issue related to currency in transaction process:





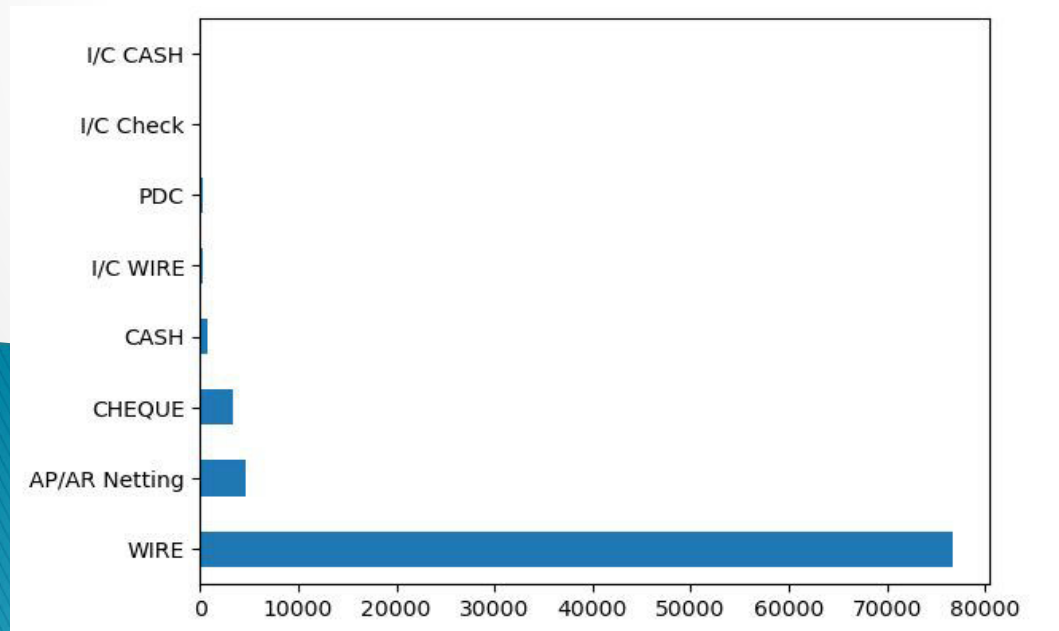
True : Late Payment



Insights

Most of the customer chooses Wire transfer as mode of payment .

Action : make wire transfer mode more feasible/faster , if possible.



Insights

In 2761 out of 85915 cases, the payment was done before the invoice was generated.

Action : Investigate the process of Invoice generation.

#Insights

Using Random Forest Model that we've built in jupyter notebook , We will predict the customers who are more likely to make late payment.

We will ensure timely payment follow-up for these customers to facilitate the recovery of cash flow.

Thank You.!

