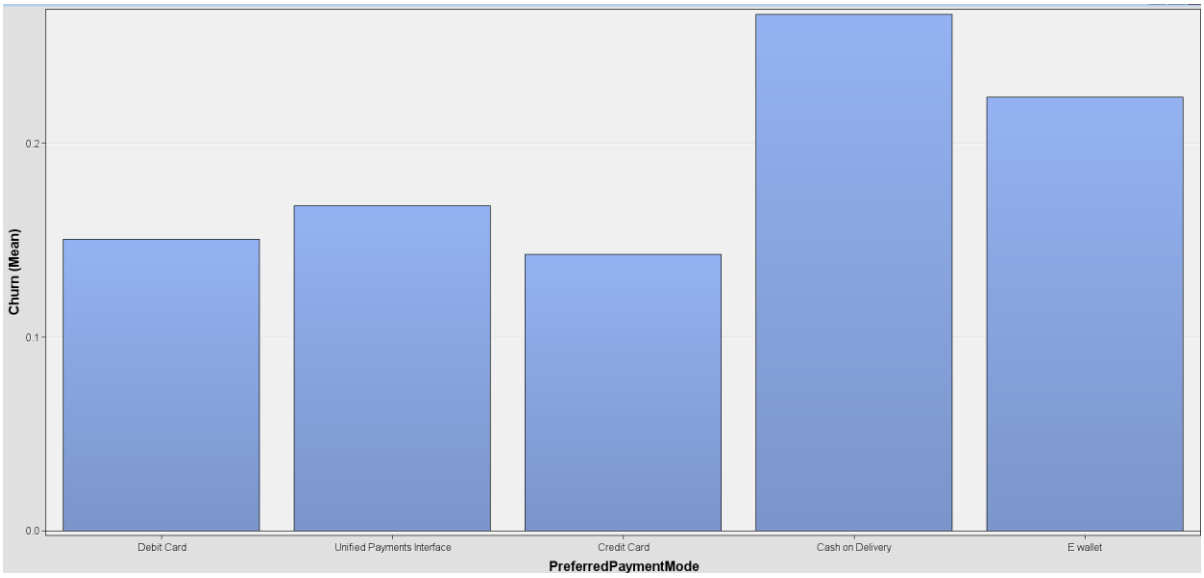
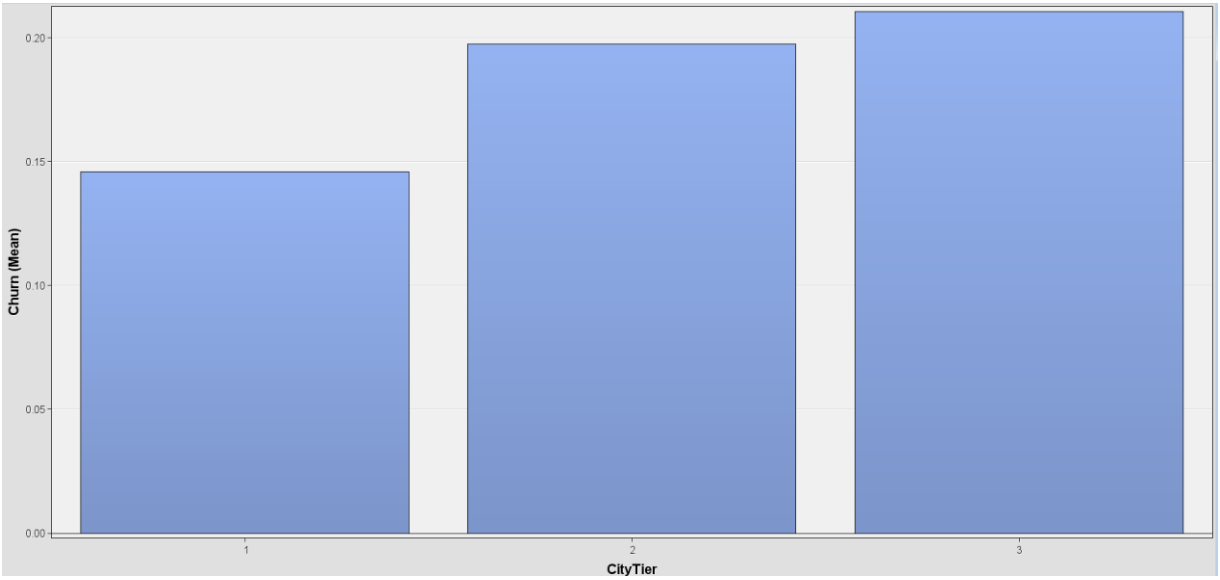
7.0 Insights into Customer Behaviour and Suggestions for Business Strategy

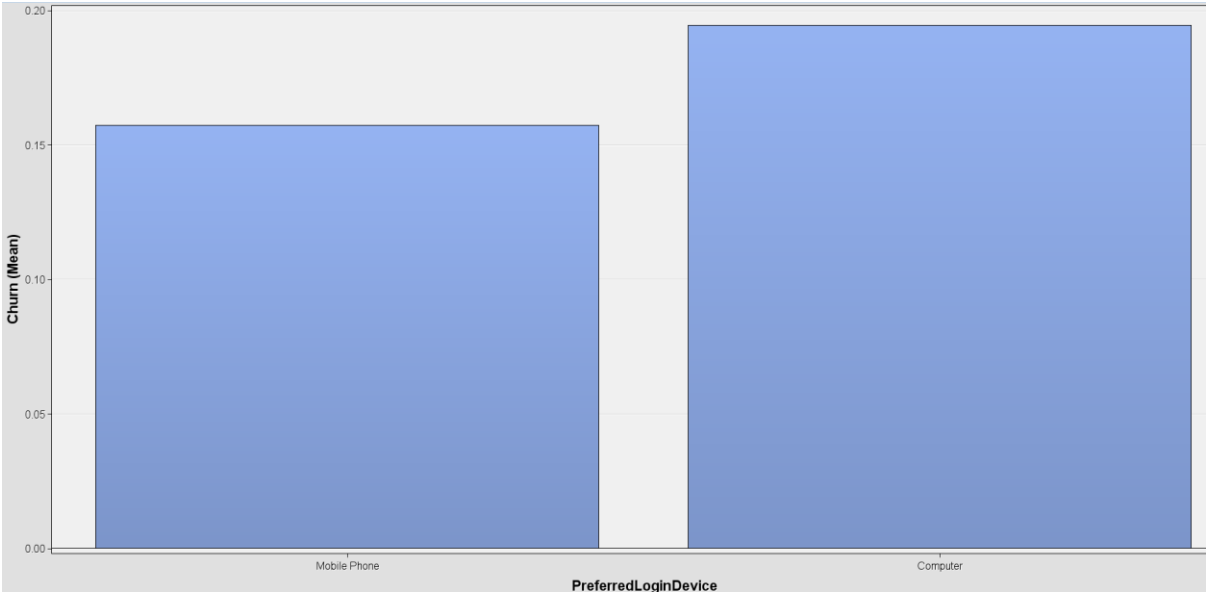
7.1 Insights into Customer Behaviour



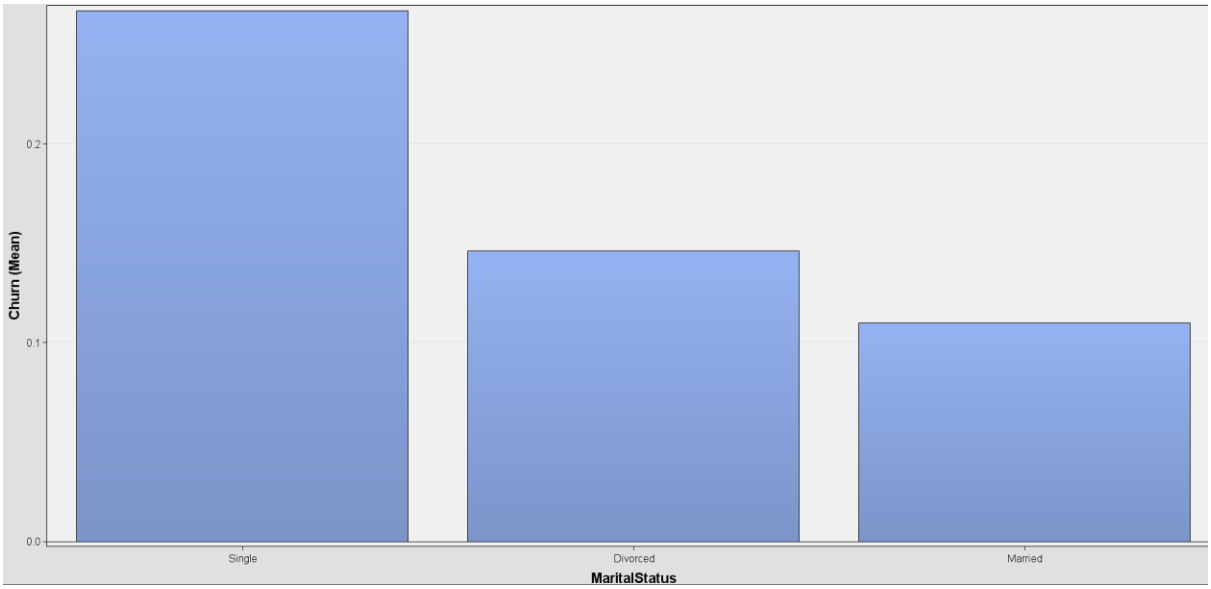
The data shows that customers using cash on delivery and e-wallet have higher-than-average churn rates. This suggests potential issues with these payment methods.



Tier 3 has a higher churn rate than Tier 2 and Tier 1. Also, both Tier 1 and Tier 2 cities still have a significant level of customer churn, which means that targeted strategies will be needed for each tier.



It is observed that customers who prefer to log in on a computer are more likely to churn than those who prefer to use a phone.



Single customers seem to show a higher churn rate than customers who are either married or divorced.

7.2 Suggestions for Business Strategy

Based on the extracted insights, below are some recommendations for business strategy.

- Investigate the reasons why COD, E-wallet and UPI customers are churning, evaluate the payment process and make improvements where needed. Explore new payment options and methods that may be more appealing to customers.

- The city tiers of their customers should be considered when developing strategies to reduce churn. Business should consider the demographics and purchasing power of their customers in different city tier to determine the optimal approach for reducing

churn. Finally, it’s important to consider the product categories being sold, as some products may be more likely to drive customer loyalty than others.

- Enhance the features and functionality available on the desktop version of the website. Also, improve the general user experience, usability and speed of both mobile phone and computer, to ensure that users have a seamless experience using their website.

- Offer personalized deals, services, or products to single customers based on their preferences and behaviour. Tailoring offerings to their interests can increase engagement and loyalty. Create loyalty programs or exclusive benefits to incentivize single customers to continue using the company's products or services.

8.0 Conclusion

In summary, Talend Data Preparation, Talend Data Integration and SAS Enterprise Miner were used to work with a dataset of customer transactions from an e-commerce website, encompassing various customer attributes and purchase history. Decision tree and ensemble methods were used to model the customer churn. Based on the results, it is concluded that all the models including pruned Decision Tree, Random Forest and Gradient Boosting managed to deliver good classification accuracy, with small misclassification rate of 9.6 – 10.7%. The selected model is pruned Decision Tree with a validation misclassification rate of 0.09698 or 9.698%. The two ensemble methods namely Random Forest and Gradient Boosting helped reduce the training misclassification rate but resulted in higher validation misclassification rate likely due to overfitting the training data. This can result in poorer performance on unseen validation data. Several insights were extracted through data mining, from which the company can tailor their business strategies to reduce customer churn rate.