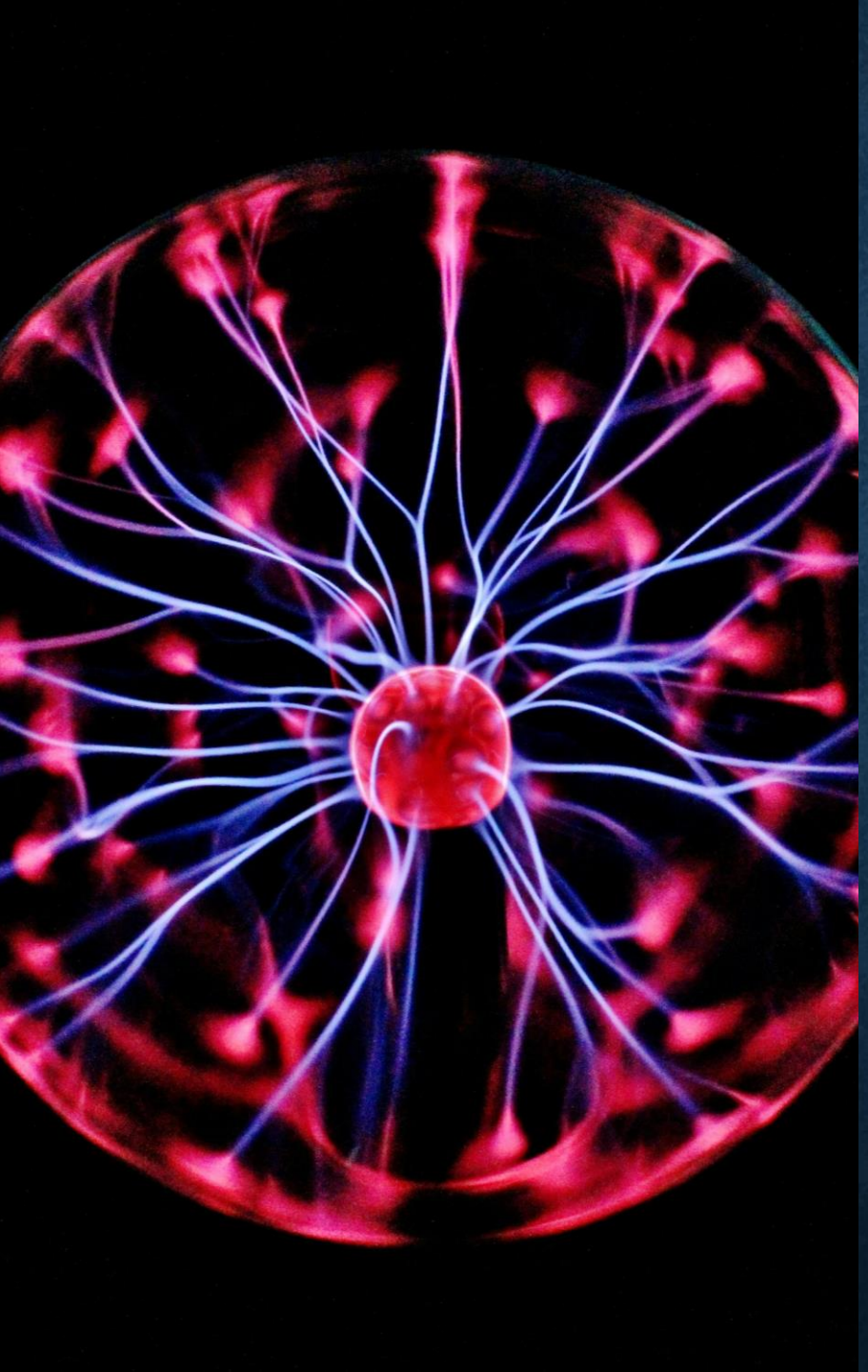
CHURN PREDICTIVE MODEL



TOPICS

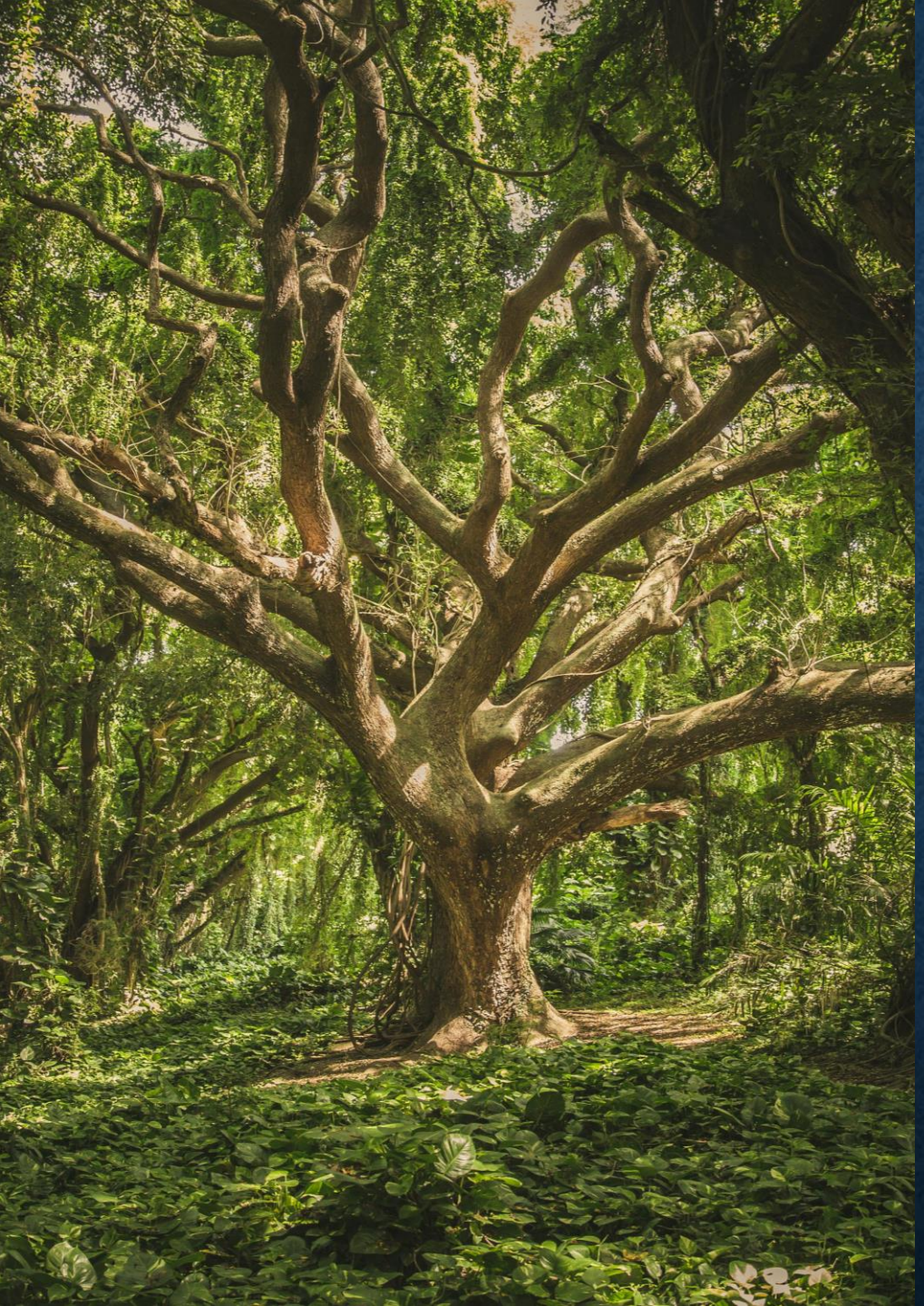
- BUSINESS PROBLEM
- MODEL SOLUTION
- HOW IT WORKS
- ADVANTAGES / DRAWBACKS
- CONCLUSION

BUSINESS PROBLEM:

- High customer churn rate reduces business revenue and market share which negatively affects shareholder margins.
- It reduces the competitiveness of the business in an ever evolving and growing market.
- Increases marketing costs as the business fights to gain new customers.
- It reduces the long-term profitability of the business

MODEL SOLUTION

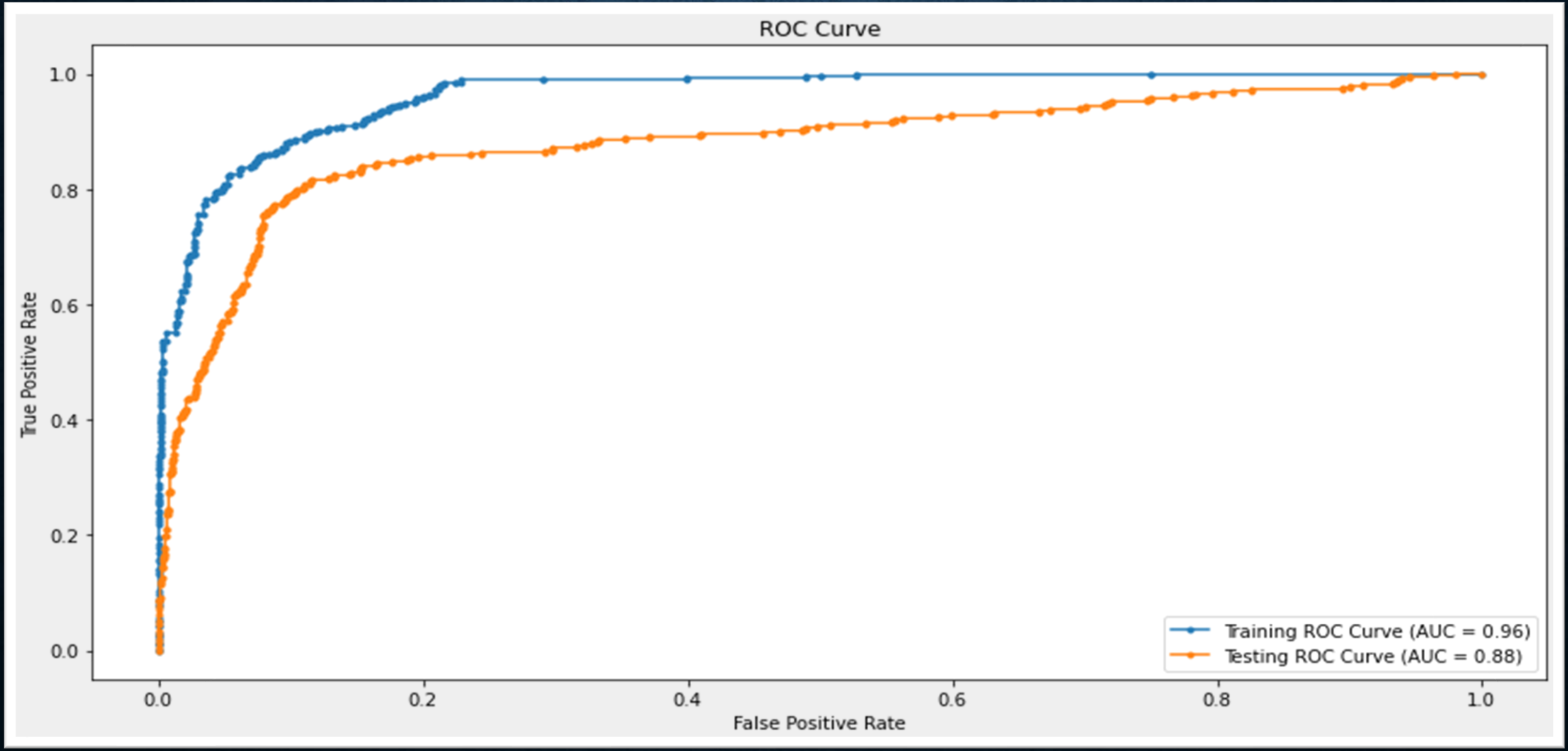
- With the use of advanced algorithms known as Random Forest Classification, my model can help the business predict customer churn based on the data provided on previous customer behaviour.
- By pin-pointing the customers at risk of churning, it can allow for efficient implementation of customer retention strategies.
- It will work as the backbone for greater market share sustainability.



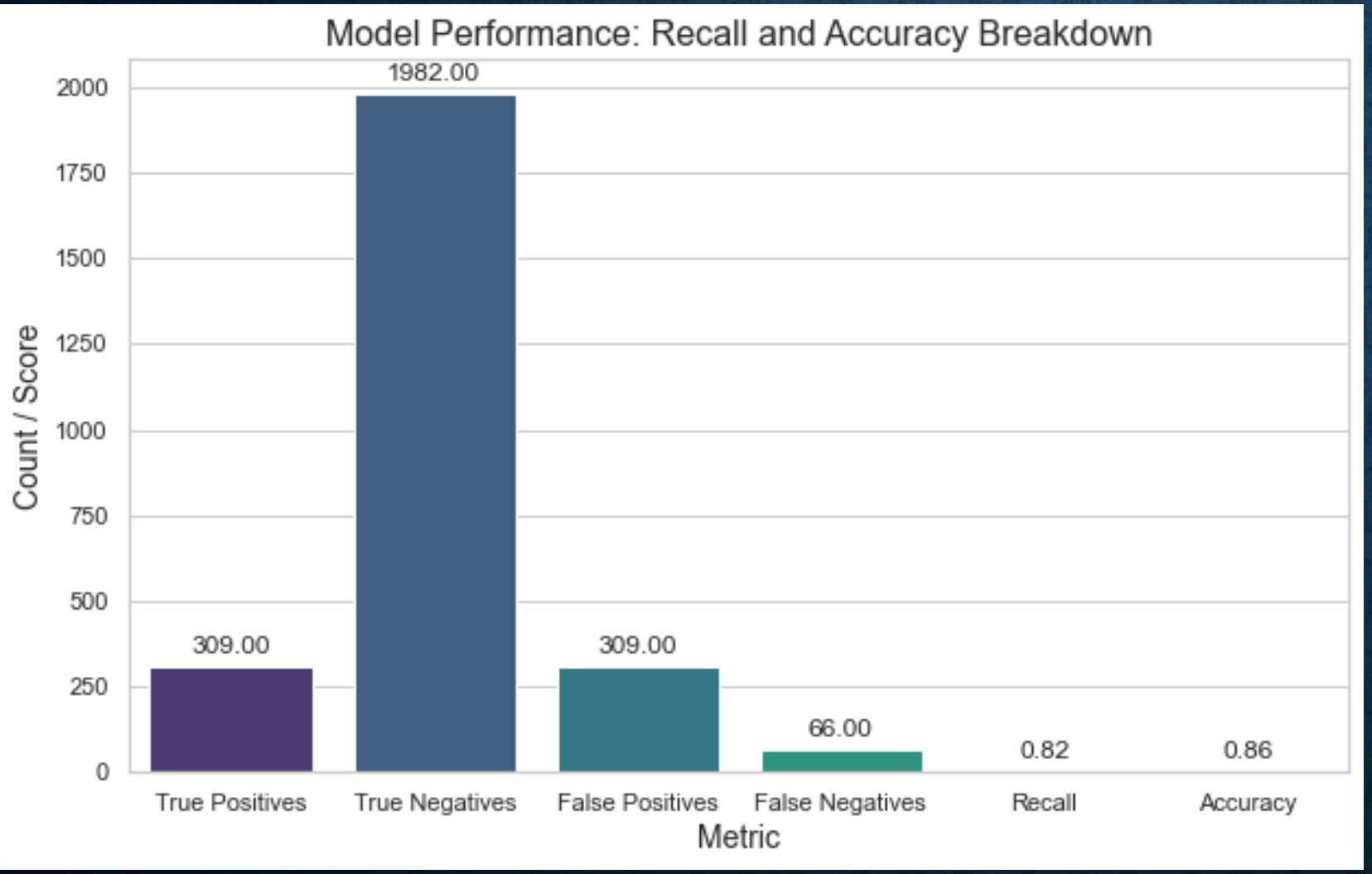
HOW IT WORKS

- The model separates the past data into different sectors.
- It then creates decision trees for these individual sectors.
- The decision tree analyzes the data within the sector to indicate whether the customer will churn or not
- Each decision tree gets a “vote” on the predicted outcome and the one with the greatest votes is then chosen.

RESULTS


ROC Curve
True Positive Rate
False Positive Rate
0.0
0.2
0.4
0.6
0.8
1.0
Training ROC Curve (AUC = 0.96)
Testing ROC Curve (AUC = 0.88)

ADVANTAGES/DISADVANTAGES



Accuracy Score: 86%

F1 Score: 62%

Precision: 50%

Recall: 82%

ROC-AUC Score: 0.88%

CONCLUSION

1. The identification of potential customer churn is crucial in the telecom industry; thus, the low precision rate is outweighed by the high recall.

2. The business needs to adapt to the need and use of predictive modelling within the sector.

3. Together we can reduce customer churn rate by more than 80%!.