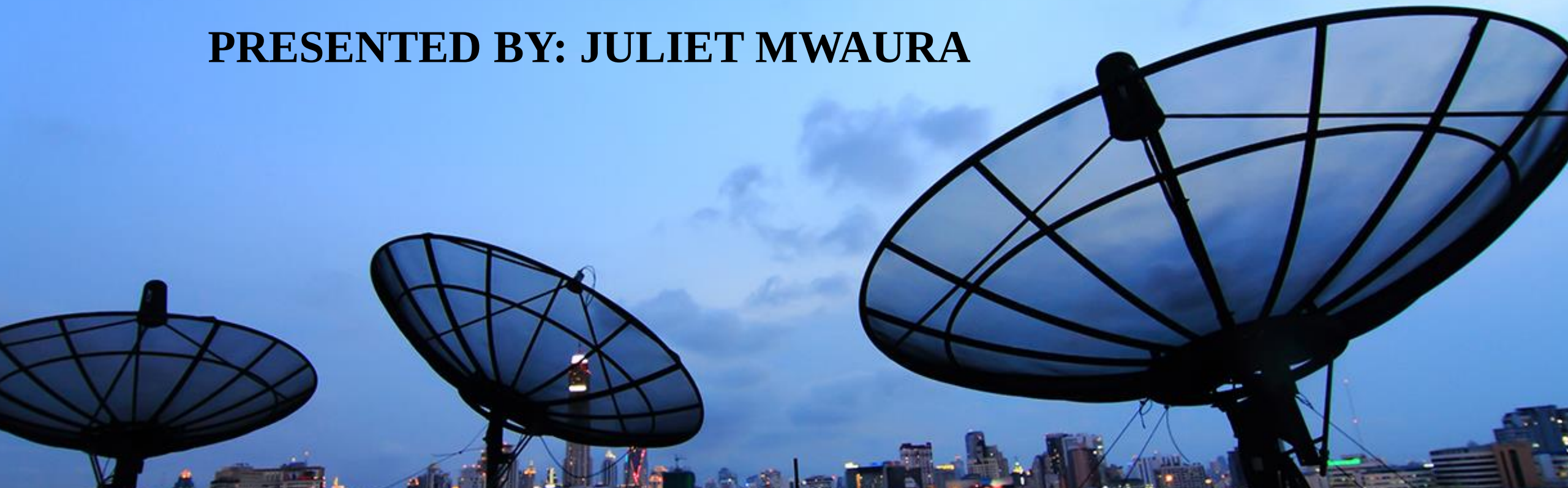
SYRIATEL Ltd

AN EXPLORATION PROJECT OF CHURN RATE

PRESENTED BY: JULIET MWAURA

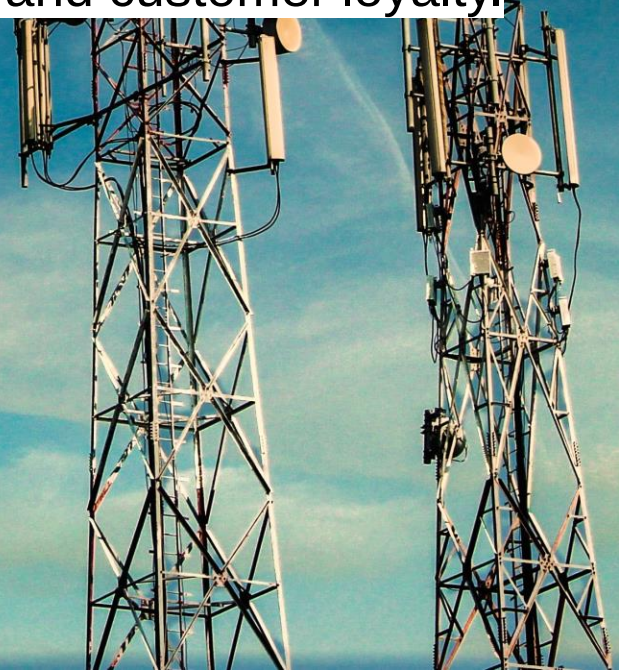


OVERVIEW

- The telecommunication industry plays a huge role in our daily lives thus stiff competition as the growth and technology expands.
- While acquiring new customers is important, telecommunication companies recognize that retaining existing ones is even more crucial.
- Customer churn, is defined as the rate at which subscribers switch to competitors, is a major concern in this industry.
- This study focuses on developing a classifier to predict customer churn propensity and to help companies in reducing amount of money lost in customer churn.

PROBLEM STATEMENT

- Given the fierce competition in the telecom sector, understanding the reasons behind customer departures, whether related to pricing, service quality, customer experience, or competitor tactics, is crucial.
- This analysis will enable SyriaTel to identify and rectify underlying problems, ultimately mitigating further churn and fostering long-term profitability and customer loyalty.



OBJECTIVES

1. Identify the factors that contribute to customer churn
2. To build a model that predicts customer churn
3. To draw conclusions and recommendation for customer retention

DATA UNDERSTANDING

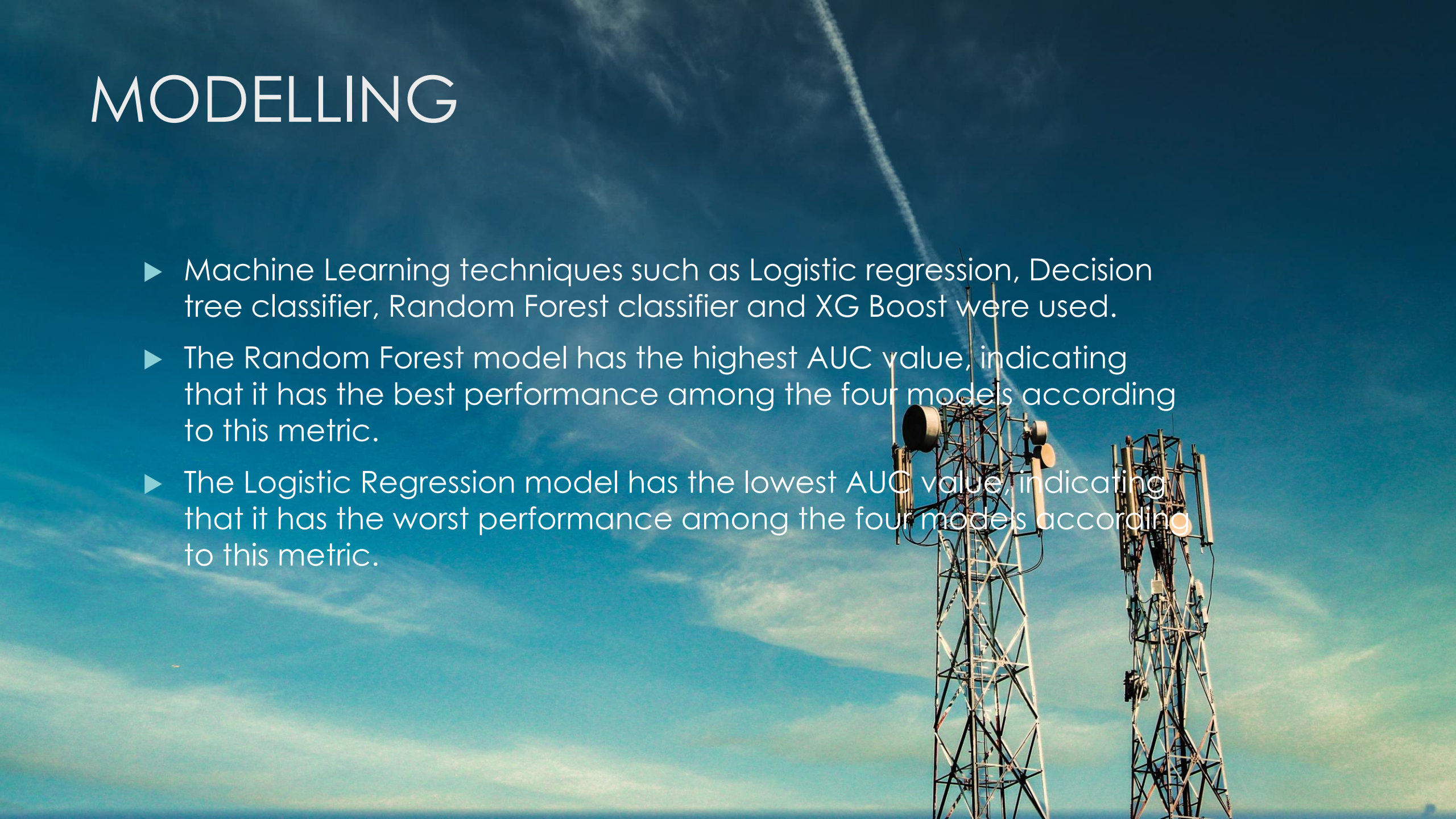
- The dataset 'Churn in Telecoms' was sourced from Kaggle
- There are 3333 records and 21 features in the data.

DATA PREPARATION

- The data had no missing values or duplicates.
- The churn distribution indicates that SyriaTel has a churn rate of 15%
- Some of the features with high multicollinearity were dropped.

MODELLING

- Machine Learning techniques such as Logistic regression, Decision tree classifier, Random Forest classifier and XG Boost were used.
- The Random Forest model has the highest AUC value, indicating that it has the best performance among the four models according to this metric.
- The Logistic Regression model has the lowest AUC value, indicating that it has the worst performance among the four models according to this metric.



CONCLUSION

- After hyperparameter tuning and picking the right train-test split value, the RandomForest gave us the metrics we required as per the objectives we set out to achieve.
- SyriaTel should prioritize the Random Forest Classifier as the primary model for predicting customer churn due to its superior overall performance and ability to accurately identify potential churners

RECOMMENDATIONS

- Offer personalized offers and discounts
- Reduce customer service calls
- Collect feedback from customers for continous re-evaluation