DATA ANALYSIS PROJECT

GROUP 8

Our Team Members

Sydney Mumbo
Chair

James Ndiritu

Brian Kanyotu

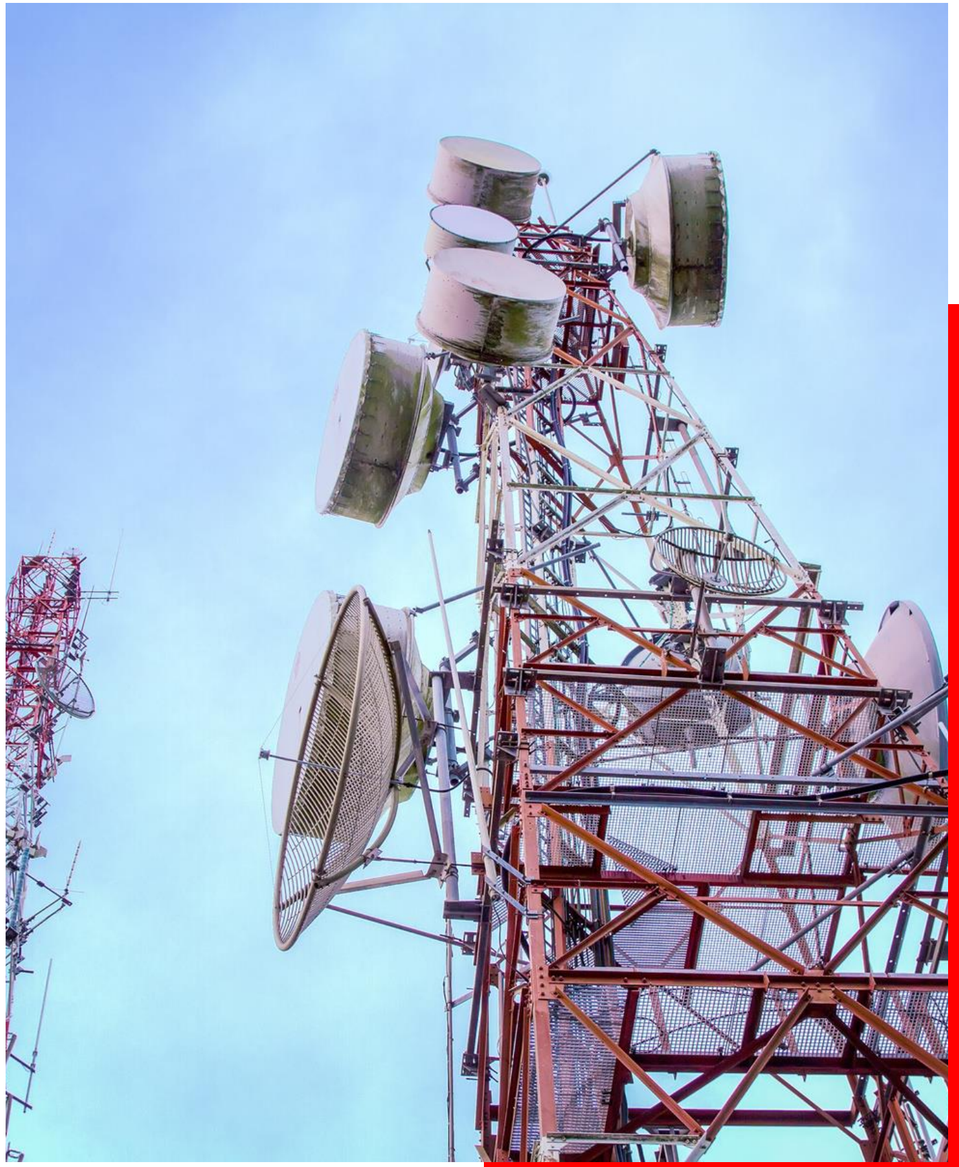
Nicholas Njubi

Chepkemoi Mercy

GROUP 8

PROJECT SUMMARY

We propose building a robust classifier to predict customer churn for SyriaTel. Leveraging predictive analytics and advanced machine learning, we aim to identify potential churners and minimize revenue loss. Our goal is to empower SyriaTel with actionable insights for proactive retention strategies, ensuring long-term business sustainability.



OUTLINE

1) Business Problem

2) Data

3) Methods

4) Results

PROJECT GOAL

Customer churn poses a significant challenge for companies, directly impacting revenue. In the competitive telecommunications industry, like SyriaTel, churn is prevalent. We aim to create predictive models to anticipate and prevent churn, supporting SyriaTel's retention strategies.

DATA

Our data, sourced from Syriatel Telecommunications (Downloaded from Kaggle website) includes comprehensive customer service records, encompassing various customer details and usage metrics such as calls, charges, and churn status.

METHOD

1) Data Loading and understanding

2) Data Preparation

3) Distribution of data

4) Data Pre-processing

5) Model development and evaluaion

6) Model Optimization

RESULTS

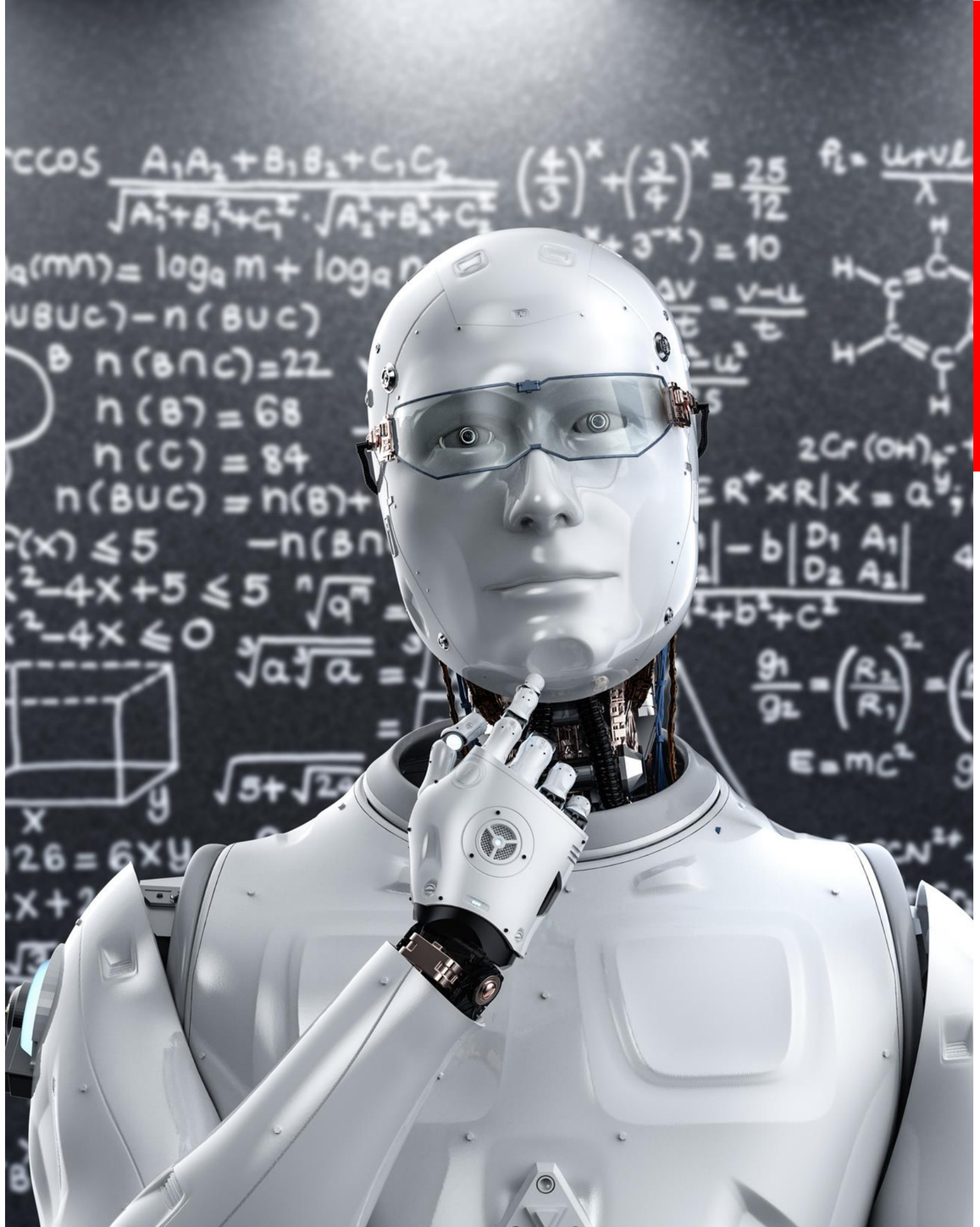
Our analysis identified the following key factors impacting customer churn:

- Total Day Minutes: Usage during daytime.
- Total International Minutes: Usage of international minutes.
- Total Day Charge: Billed cost for daytime calls.
- Total Evening Charge: Billed cost for evening calls.
- Customer Service Calls: Number of calls to Customer Service.
- International Calls: Total international call count.
- Total Charge: Sum of Day, Evening, Night, and International charges.

RESULTS

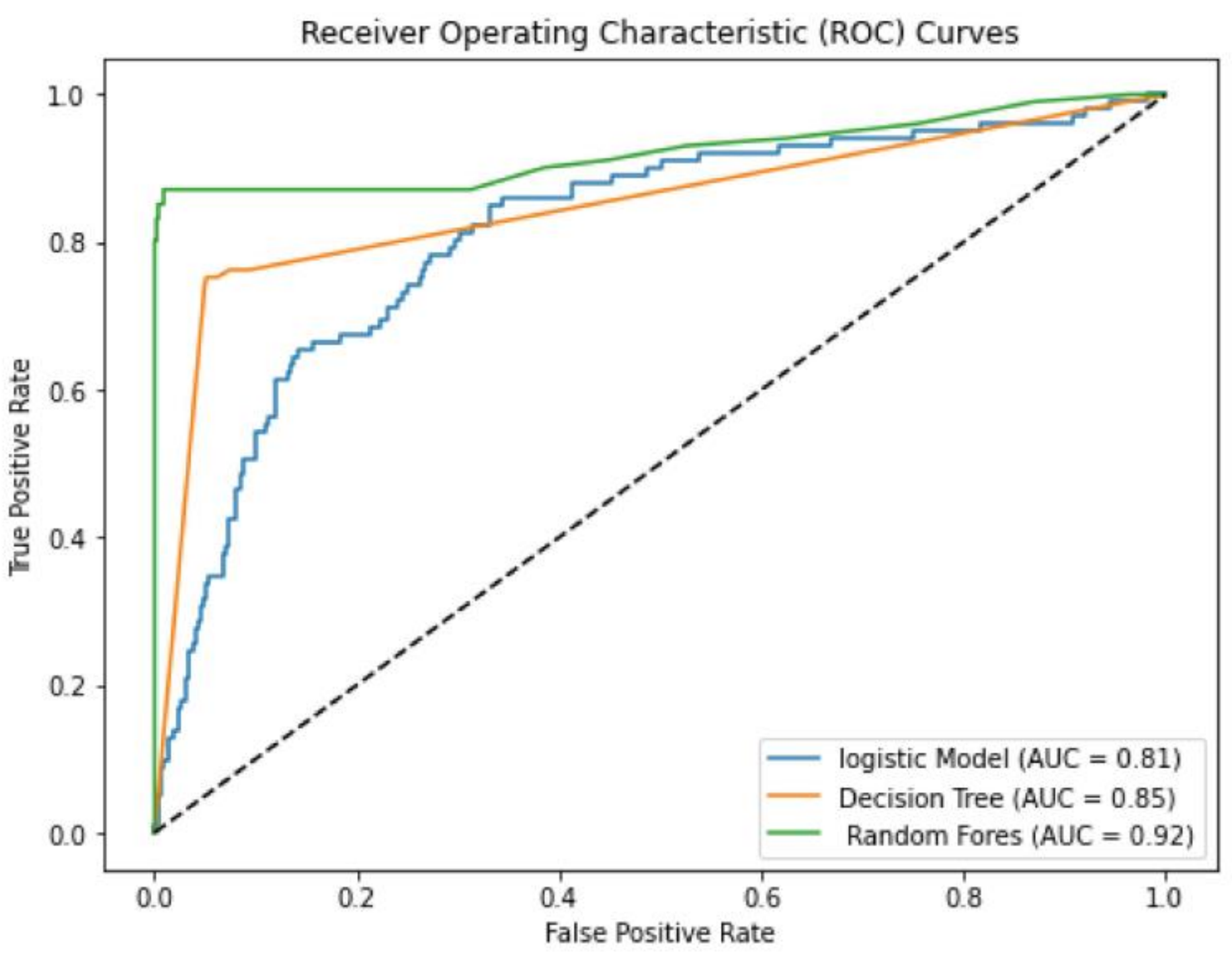
Syriatel's data analysis showed Random Forest Classifier excels, offering superior accuracy for classification tasks.

Think of it as a reliable team providing insights for confident business decisions, like predicting customer churn.



Why Random Forest?

After our investigation, we chose Random Forest as the best option, thanks to its top AUC score, meeting our needs effectively.



Recommendations

- Introduce discounts and offers to reduce churn rates and incentivize customer loyalty.
- Lower call charges to improve customer satisfaction and retention.
- Refine service agent training programs for faster and better assistance.
- Improve network coverage and service quality to minimize customer service calls and enhance customer experience.


THANK YOU.
TILL NEXT TIME!