



# SYRIA TELECOMMUNICATIONS LIMITED

AN EXPLORATION OF THE HIGH CHURN RATE

A PRESENTATION BY GEORGE KARIUKI

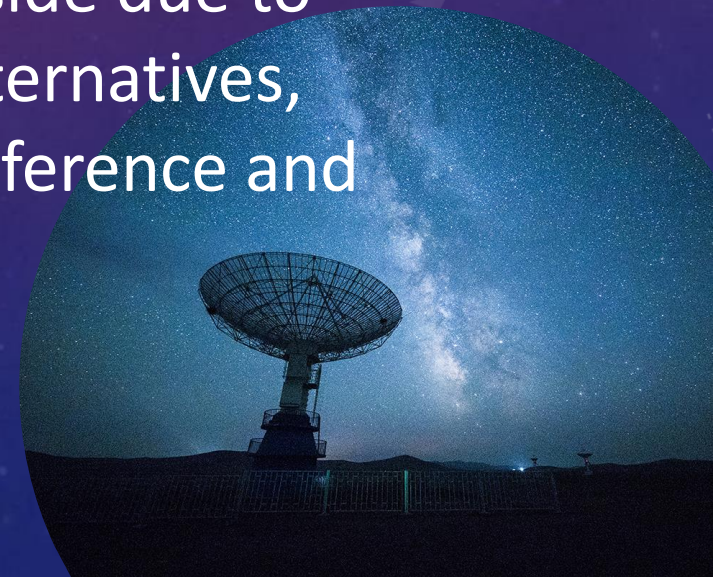
# BUSINESS UNDERSTANDING





# OVERVIEW

- The telecommunications industry worldwide brags as being one of the few industries with the most stiff competition and unstable business conditions for any soft hearted telecommunications companies.
- Customer retention rates rock violently from side to side due to economic downturns, increased costs, competitive alternatives, increased technology, globalization, government interference and restrictions, among many other factors.



# PROBLEM STATEMENT

- Management of Syria Telecommunications Limited realize the potential losses arising from this rampant churning of its customers from, what it thought to be, it's firm grasp.
- The Data Science Department has been tasked with obtaining, scrubbing, exploring, and understanding the patterns with it's customers and recommending any steps to be followed.





# CHALLENGE AND BUSINESS PROBLEM

- With the booming profits and market share interests that could potentially be gained, Syria Telecommunications faces a downward trajectory in terms of customer retention which would inevitably lead to a deviation from the business goals of the organisation.



# OBJECTIVES

- To identify factors leading to increased churn rates
- To create a classification model that predicts whether a customer will churn with a recall of over 80%
- To give customer retention recommendations

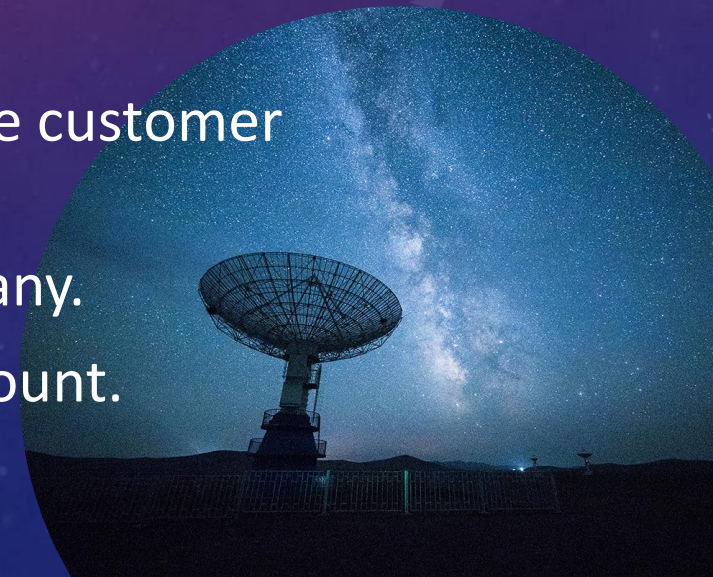




# DATA UNDERSTANDING



- The data was sourced from Kaggle and was stored in a CSV file format.
- The data contained 3,333 rows and 21 records.
- Key Features include:
  - ❖ Minutes and Calls – Consumer's purchase of minutes and calls made to the domestic and international regions
  - ❖ Charges – Charges billed to consumers for making their domestic calls during the day, evening and night, and international calls.
  - ❖ Subscriptions – A binary value indicating if the consumer has an international plan or a voice mail
  - ❖ Customer Service Calls – Number of times a user has called the customer service
  - ❖ Churn - This binary feature indicates if the user left the company.
  - ❖ Account Length – period of time the user maintained their account.





# FINDINGS



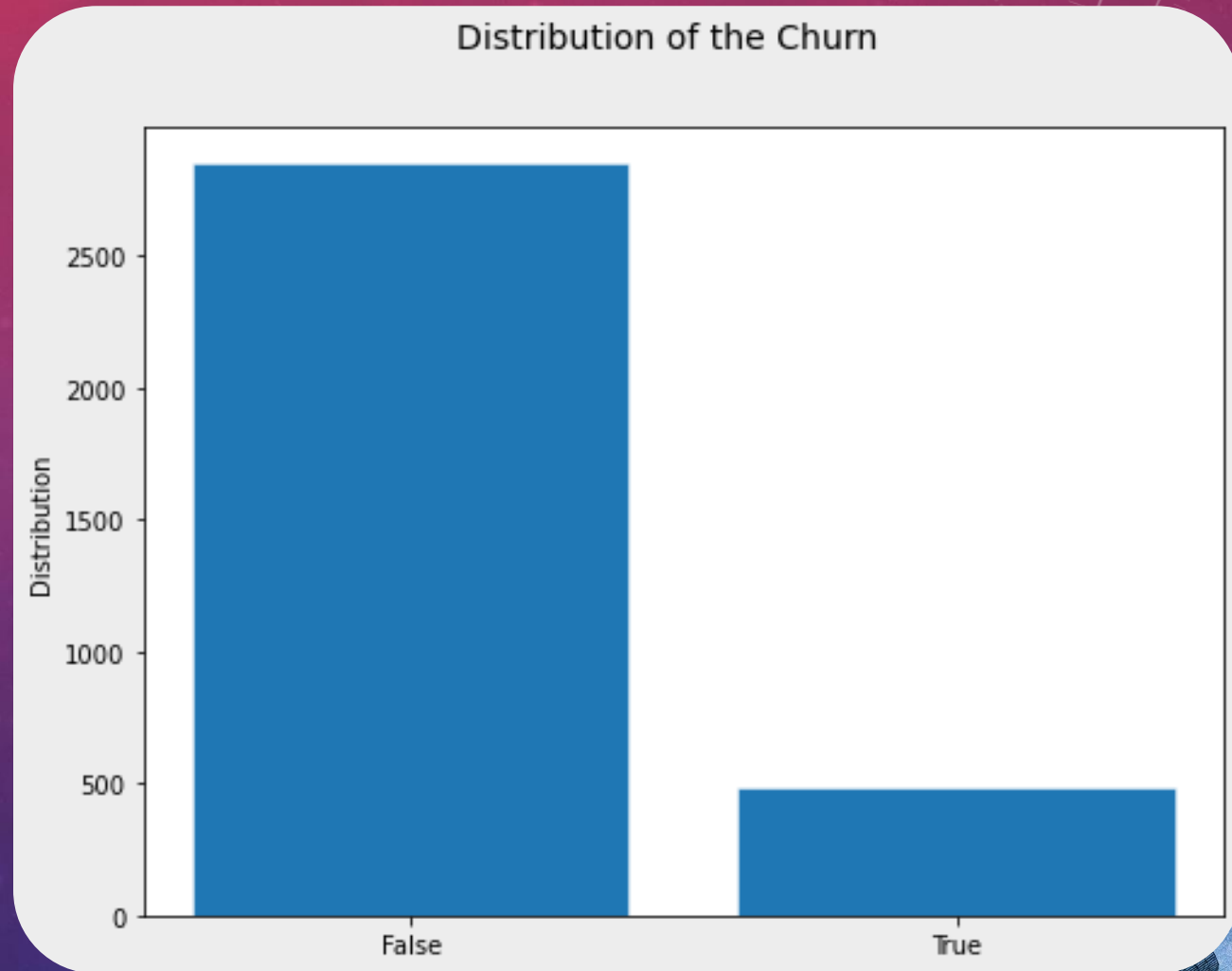
# UNIVARIATE ANALYSIS





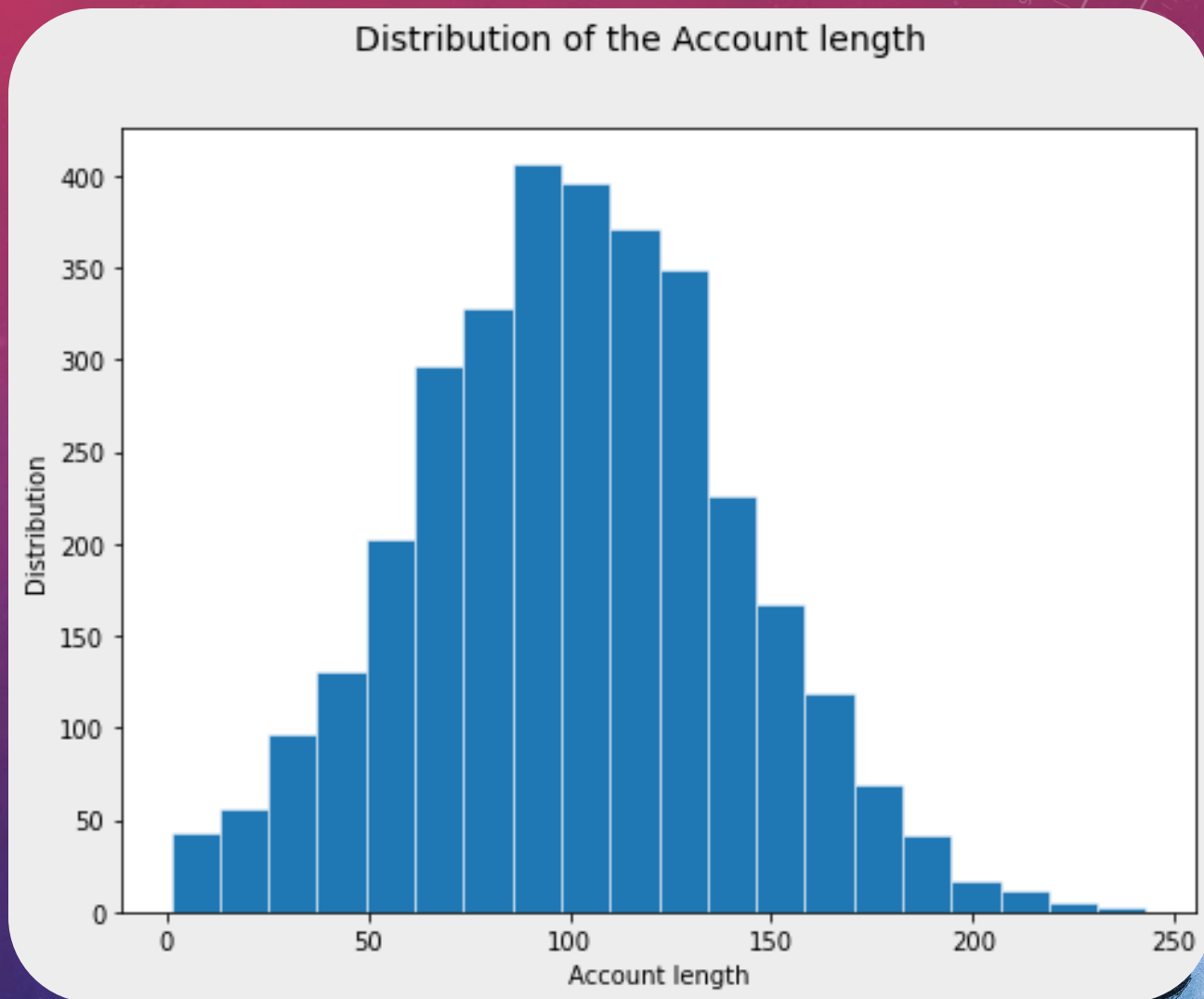
# CHURN RATE

Near 85% of consumers stayed while 15% of the consumers churned.



# ACCOUNT LENGTH

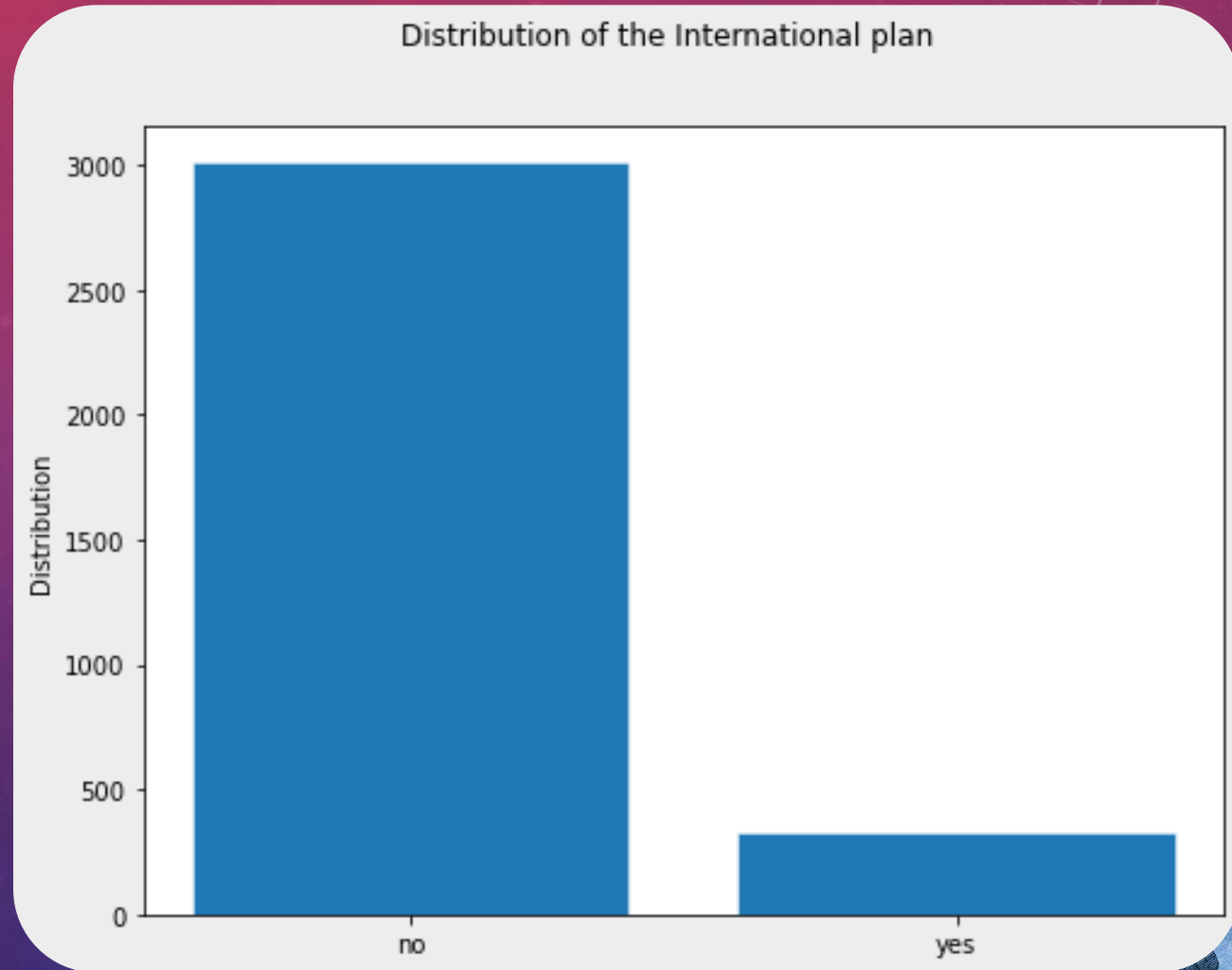
The mean and median of users' account length was around 101 days.





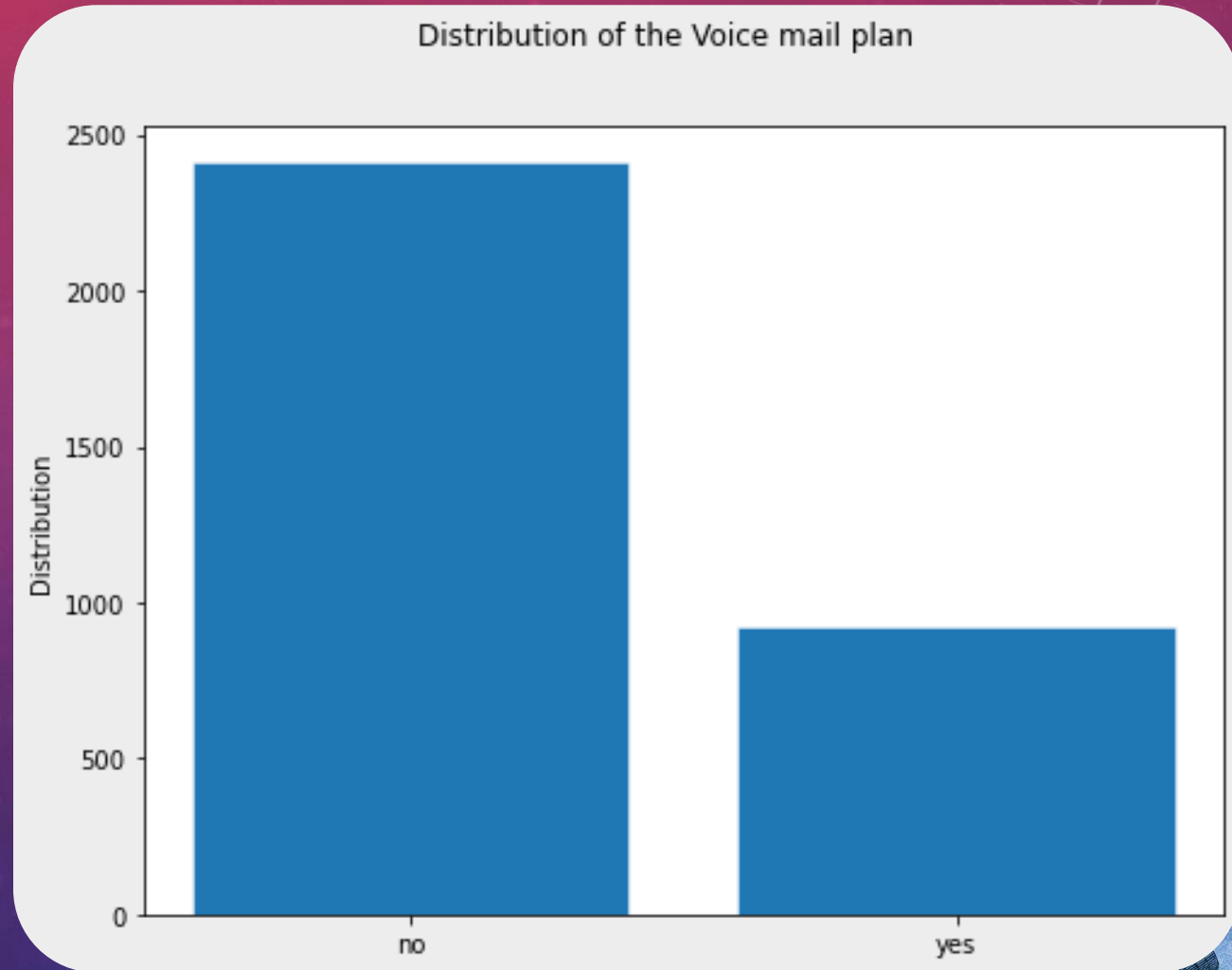
# INTERNATIONAL PLAN

Near 90% of consumers do not have an international plan while 10% of the consumers have an international plan.



# VOICE MAIL PLAN

Near 86% of consumers do not have a voice mail plan while 14% of the consumers have a voice mail plan.



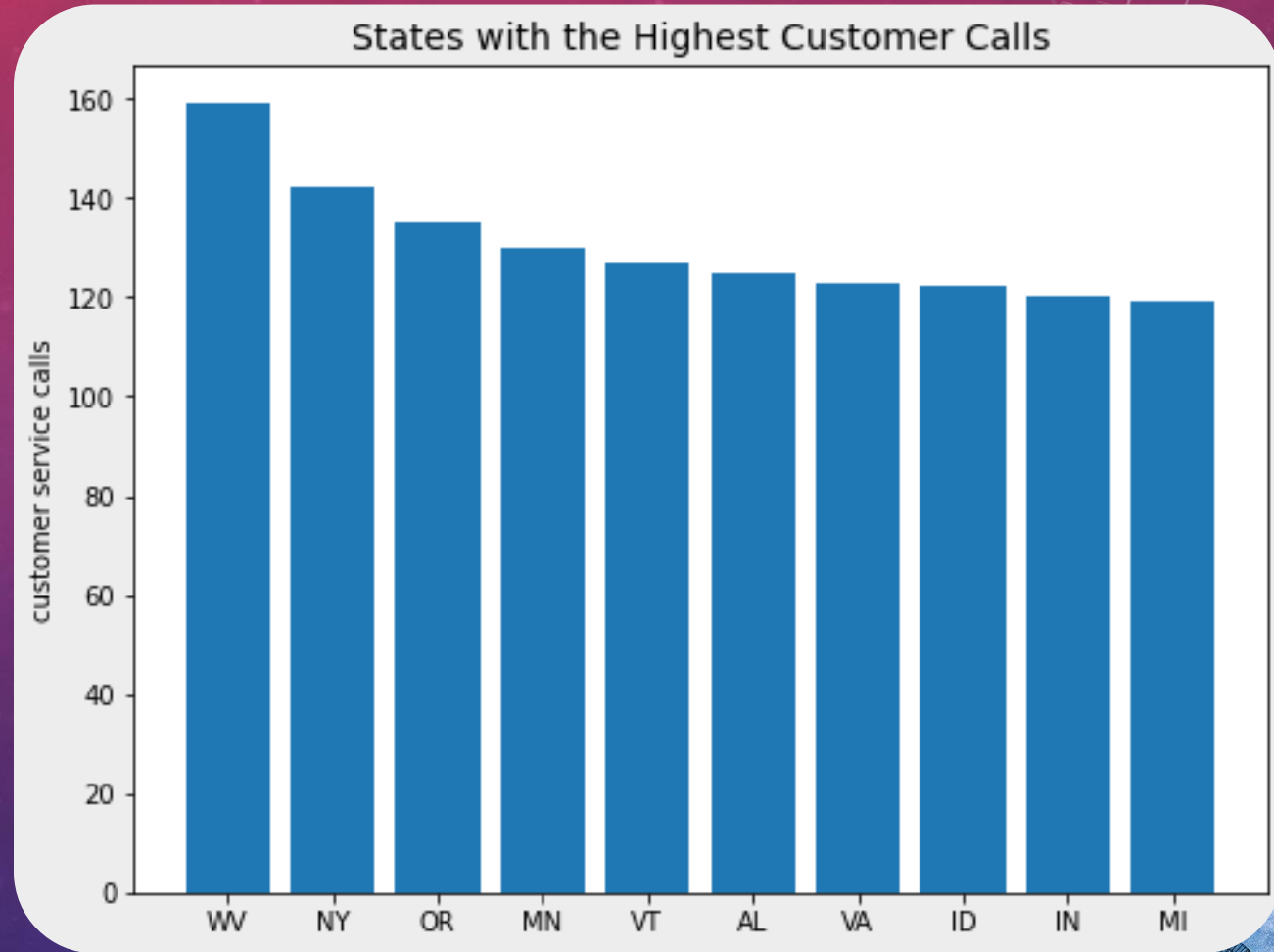


# BIVARIATE ANALYSIS



# STATES AND CUSTOMER SERVICE CALLS

Customers who frequently call the service are from these top 10 locations – showing an issue in these locations.

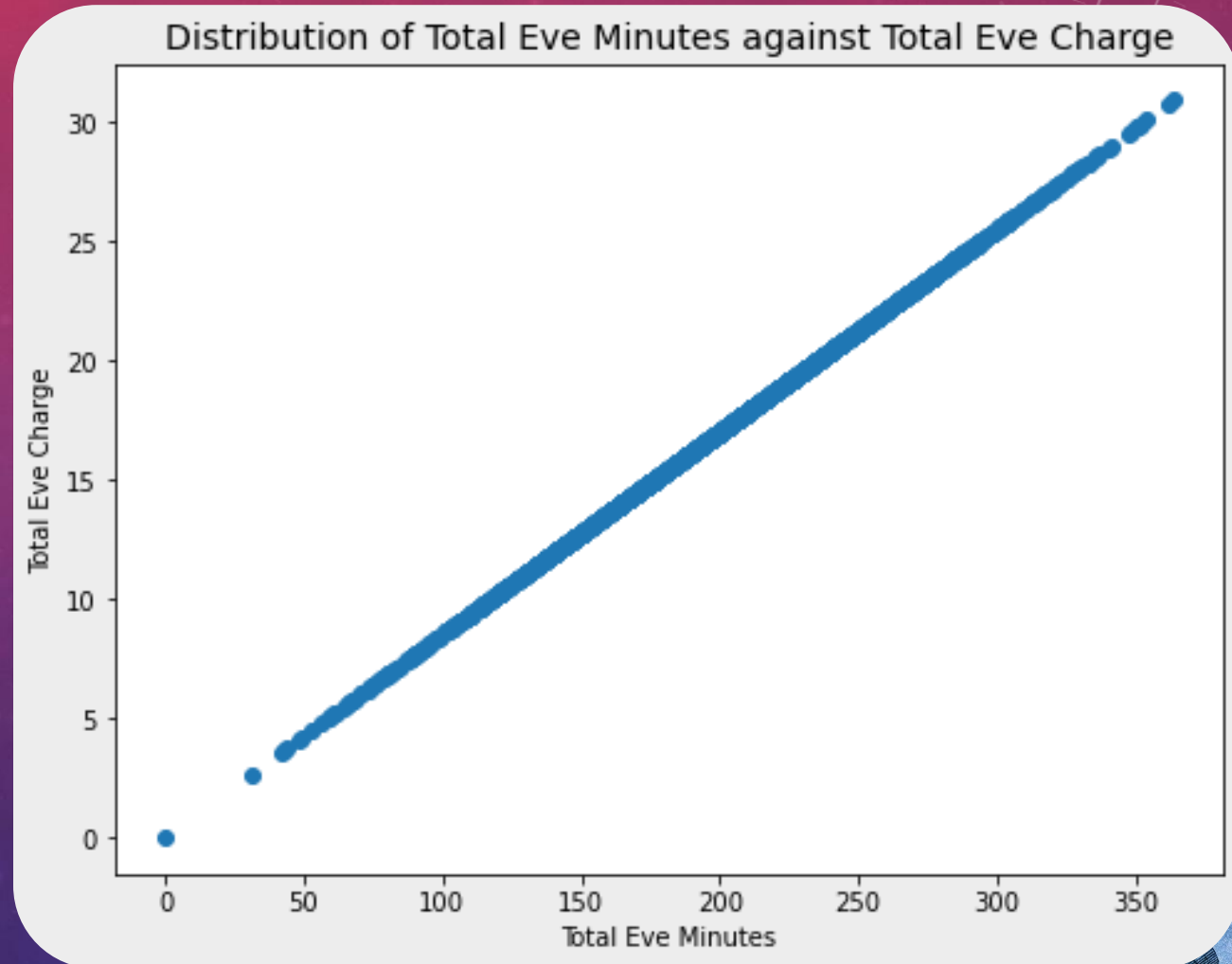




# MINUTES AGAINST CHARGES

There is a perfect correlation between the minutes and the charges.

This relationship holds true for the day, night and international minutes and their charges.



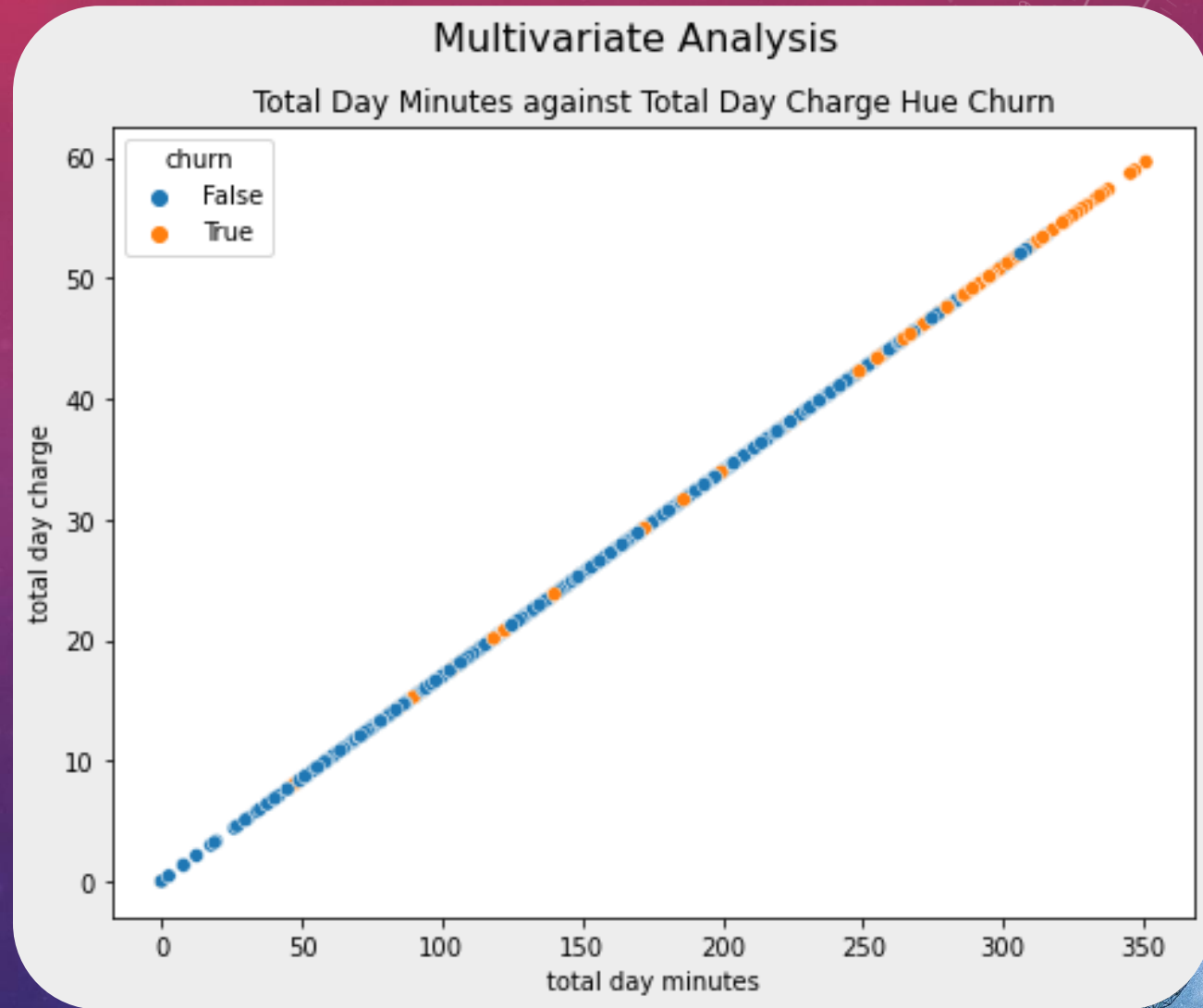
# MULTIVARIATE ANALYSIS



# MINUTES V CHARGE V HUE

Consumers churned when they were billed for charges above the average charge and were also purchasing a lot of talk-time minutes.

This relationship was evidenced in other features like evening, night and international.

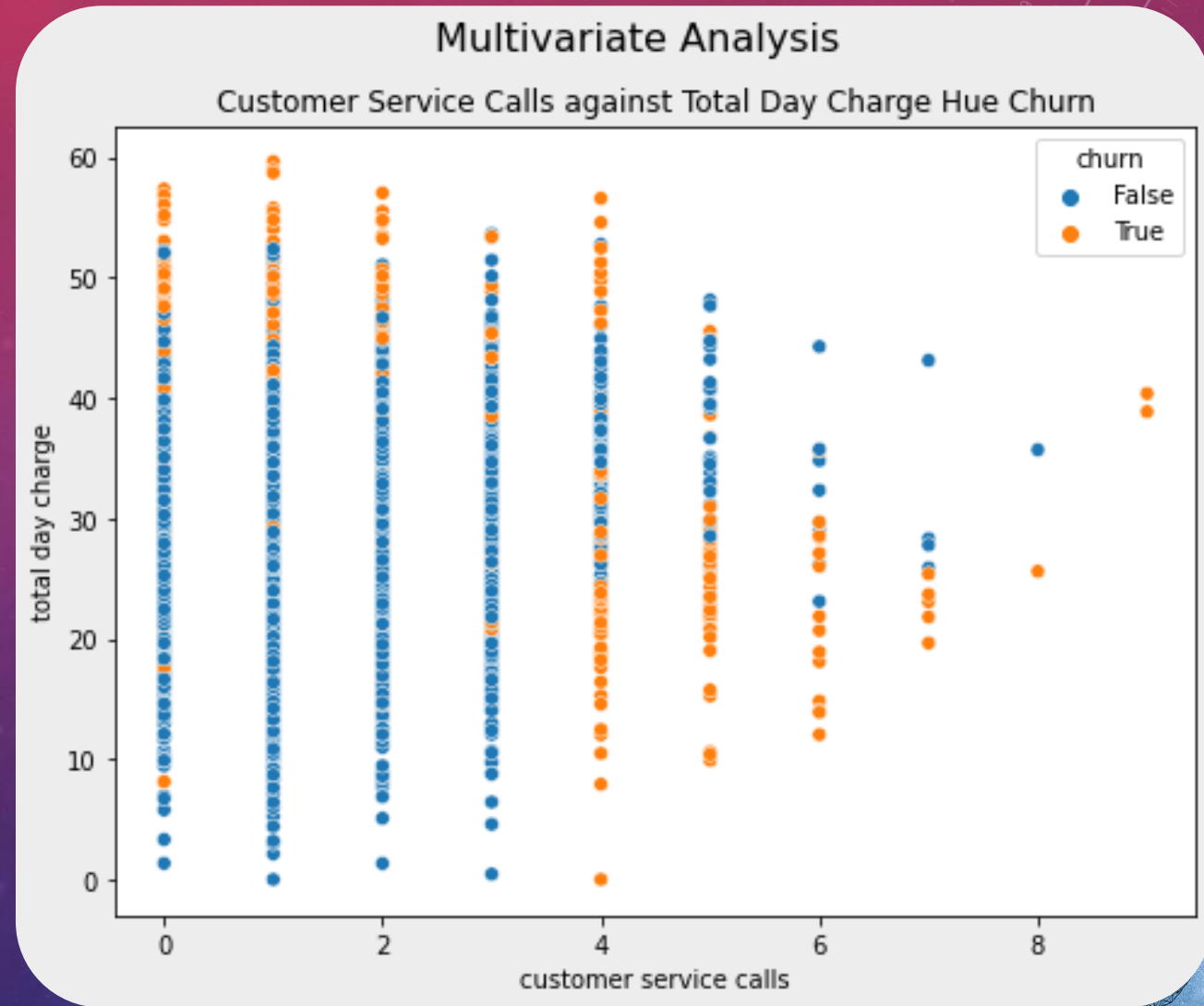




# SERVICE CALLS V CHARGE V HUE

Consumers churned when they were billed above average rates and called the center below 3 times.

Consumers also churned when they paid lower rates but had to call the center more than 3 times.



# MODELLING



# RANDOM FOREST MODEL

- Out of all tested models, Random Forest Classifier provided the highest metrics required to predict churning in consumers.





# RECOMMENDATIONS





Bespoke packages, Incentives and Rewards – Minutes, Voice Mail and International Plans could be bundled together



Trained Customer Service Agents and Customer Feedback Recording







Upgrade Technology in problem areas where there are high customer service rates.



Re-evaluation of price points by using a mix of linear and constant prices.





# QUESTIONS AND FEEDBACK





# THANK YOU!

GEORGE KARIUKI