

# THE SYRIATEL CUSTOMER CHURN PREDICTION

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# CHURN BACKGROUND



- SyriaTel is losing customers, which leads to revenue loss
- Acquiring new customers is more expensive than retaining existing ones
- Reducing churn is a key business priority

Understanding why customers leave allows SyriaTel to act before they churn.

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# BUSINESS PROBLEM & OBJECTIVE

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- Problem: Customers are leaving SyriaTel services
- Impact: Revenue loss and increased acquisition costs
- Objective: Identify customers likely to churn before they leave



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# BUSINESS UNDERSTANDING

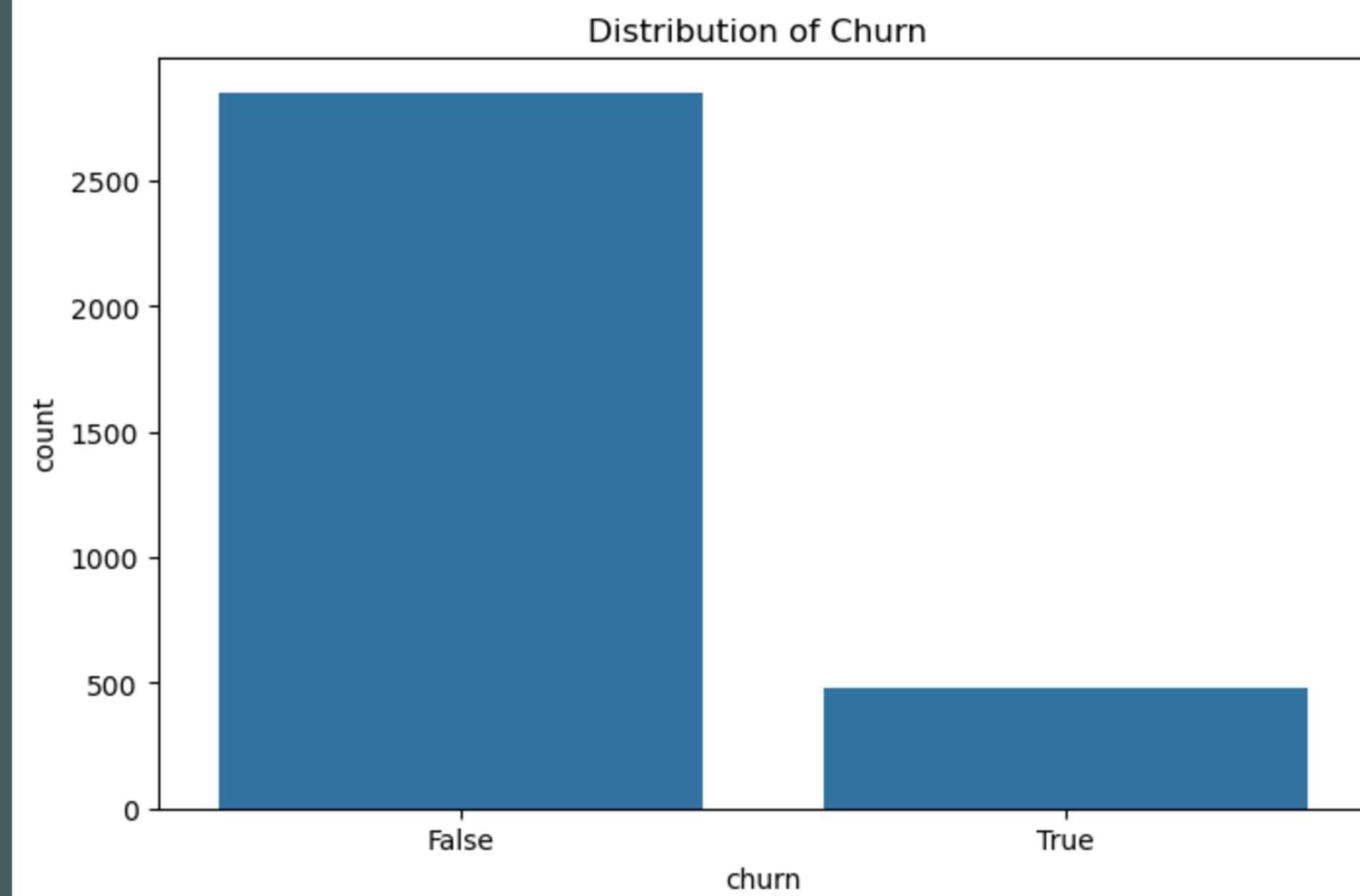


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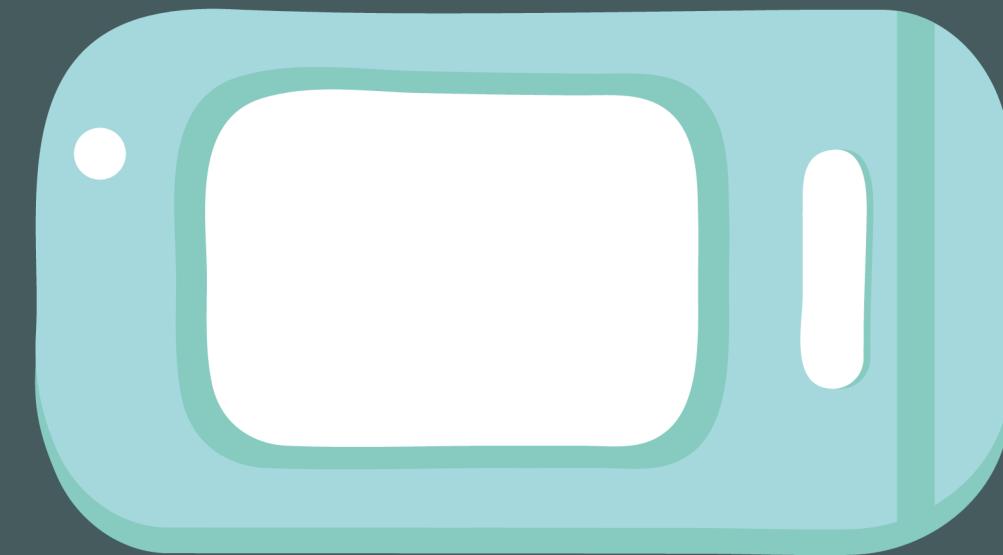
- Primary Stakeholders: SyriaTel management & retention team
- Business Value:
- Focus retention efforts on high-risk customers
- Reduce churn-related revenue losses
- Improve customer satisfaction

# DATA OVERVIEW

- The dataset contains 3,333 customers
- Includes usage patterns, service calls, and plan details
- Target variable: Churn (True / False)
- Most customers do not churn, making prediction challenging

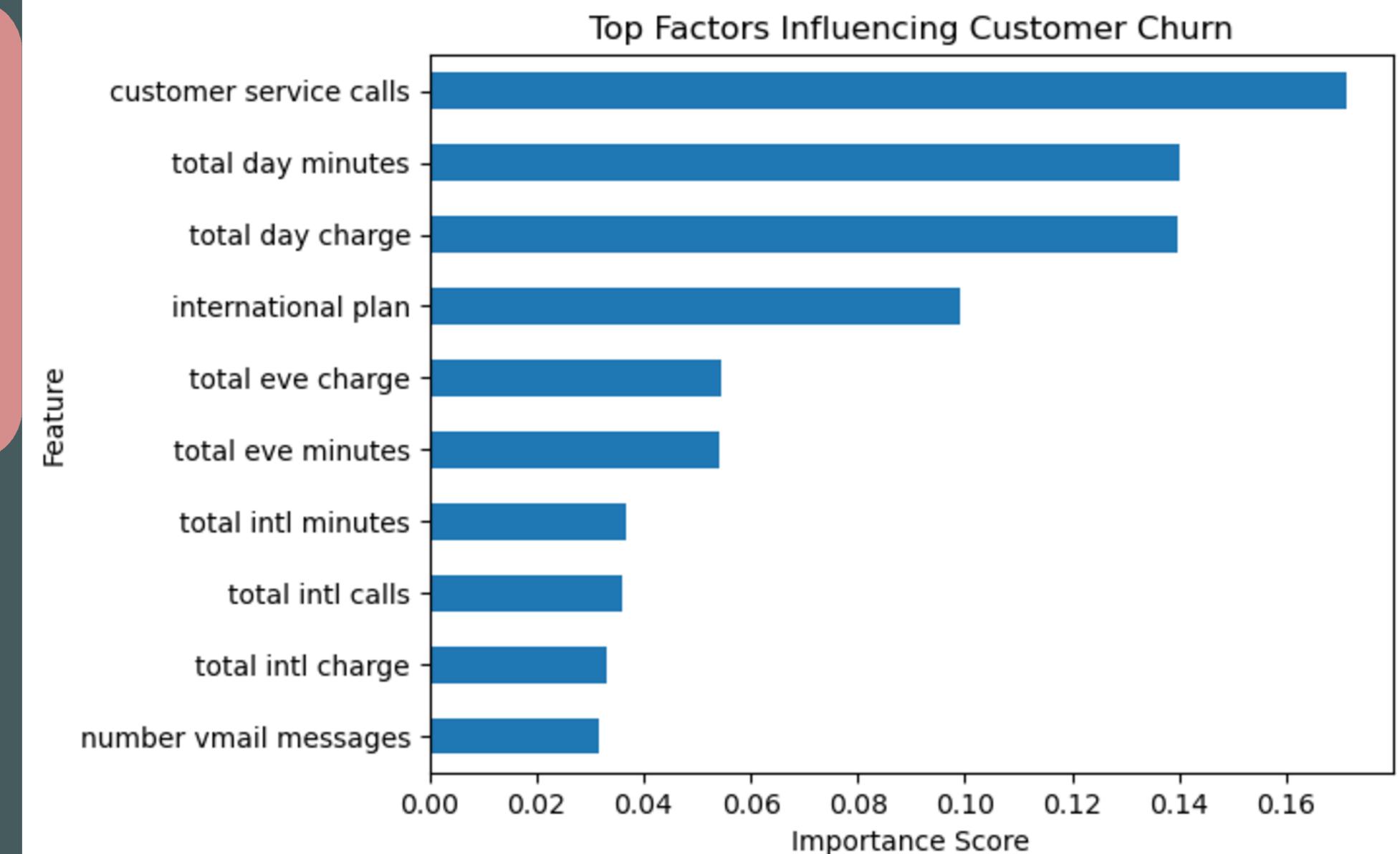


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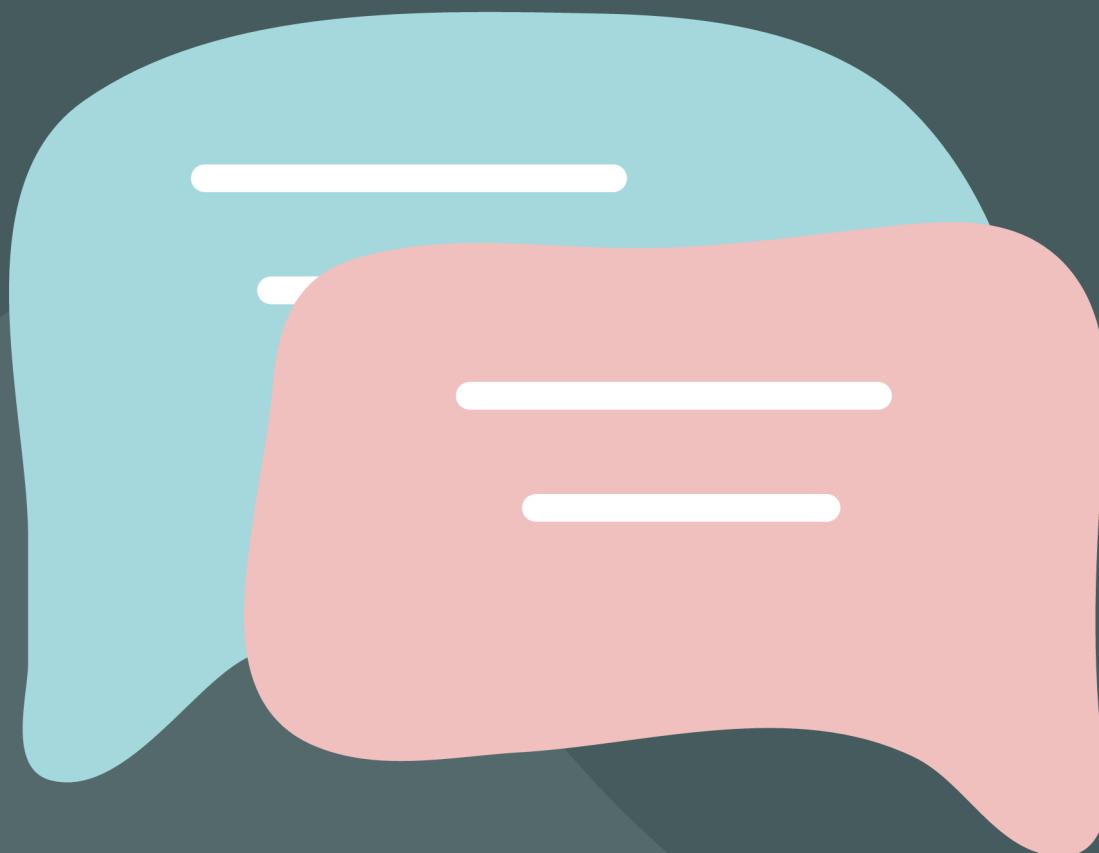


# KEY CUSTOMER FEATURES

- Day-time usage and charges
- Number of customer service calls
- International plan and charges
- Voice mail plan



# DATA PREPARATION



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- Encoded categorical variables
- Scaled numerical features
- Split data into training and test sets
- These steps ensure fair and accurate model training.

# MODELING APPROACH

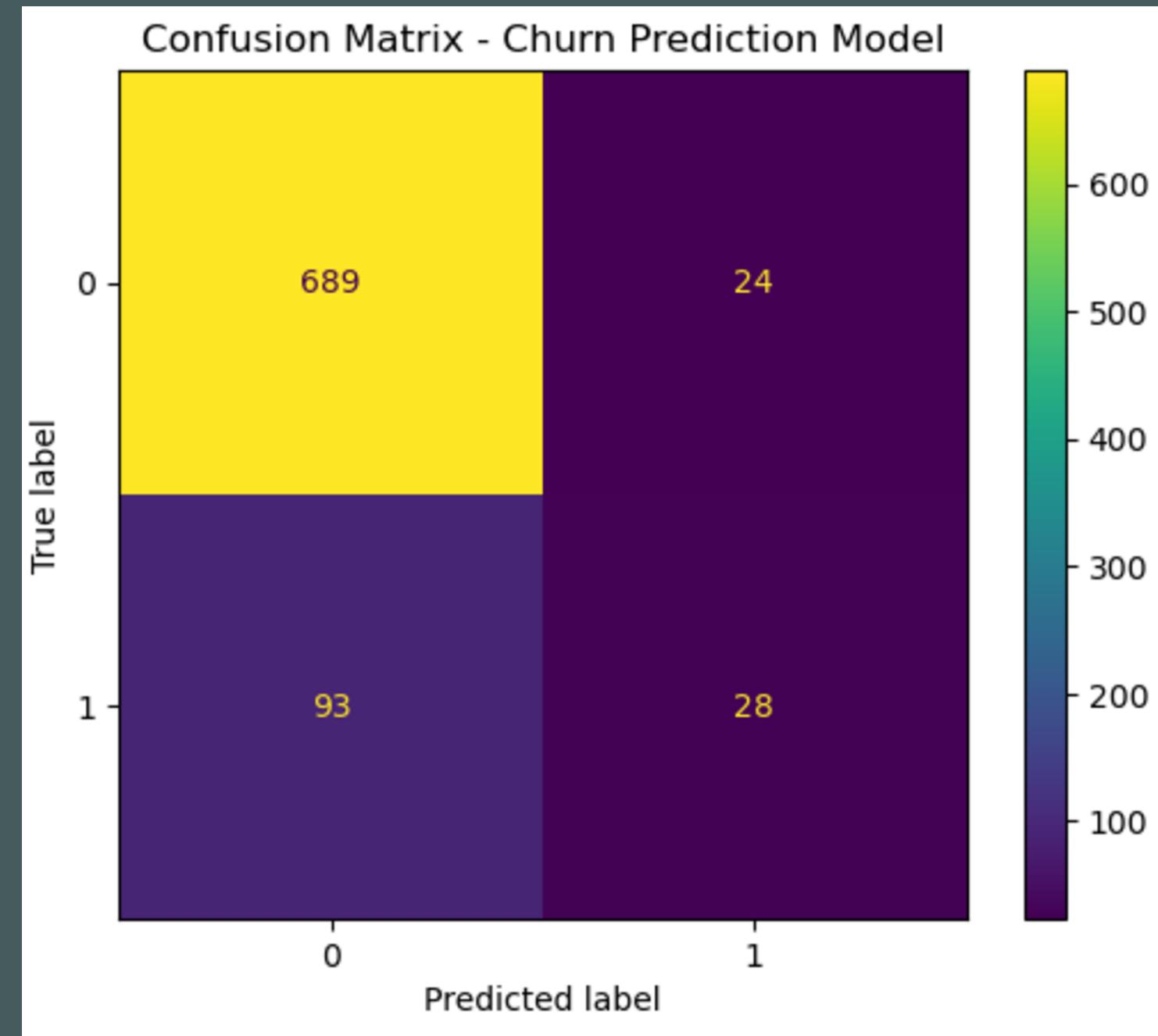


- Logistic Regression used as a baseline model
- Random Forest used to capture complex churn patterns
- Models compared using performance metrics

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# MODEL EVALUATION

- Logistic Regression used as a baseline model
- Random Forest used to capture complex churn patterns
- Models compared using performance metrics
- Missing a chunner is more costly than contacting a loyal customer.

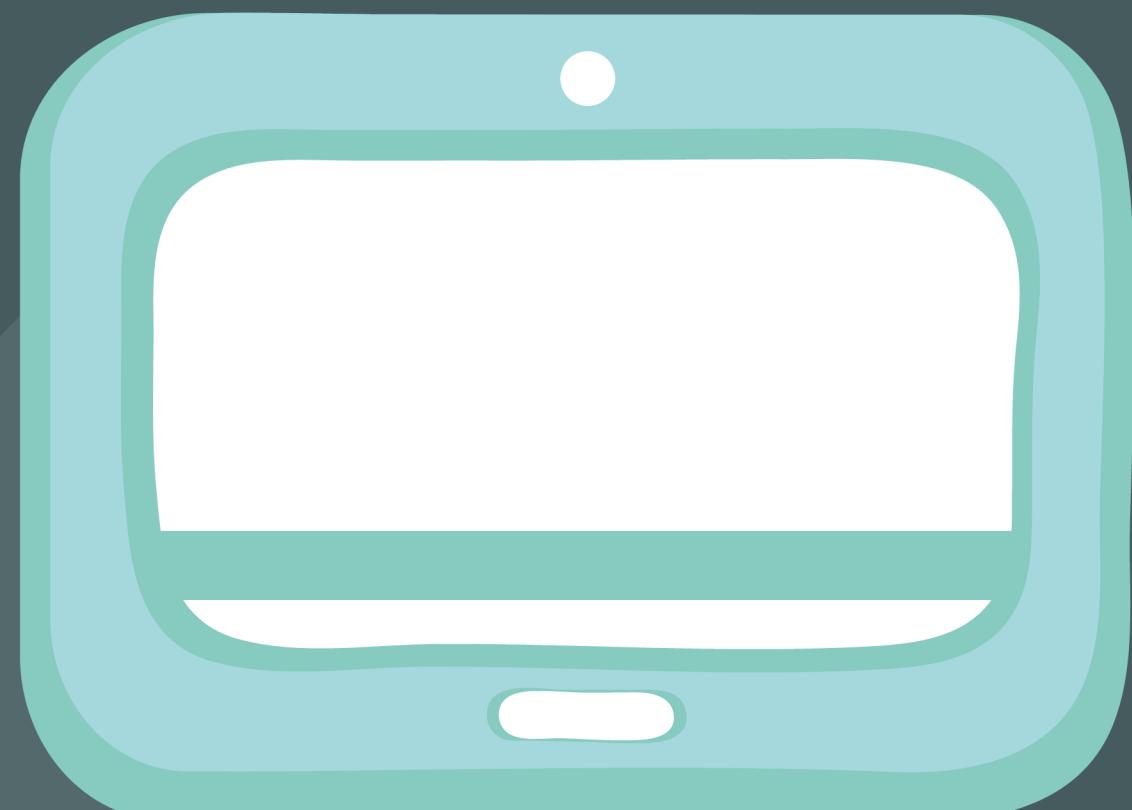


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# MODEL PERFORMANCE

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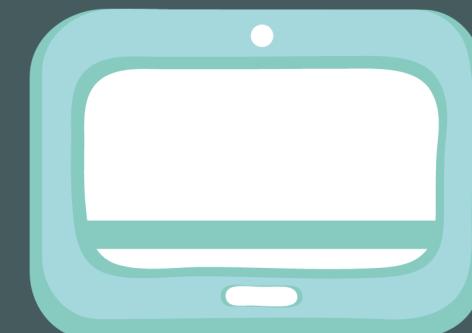
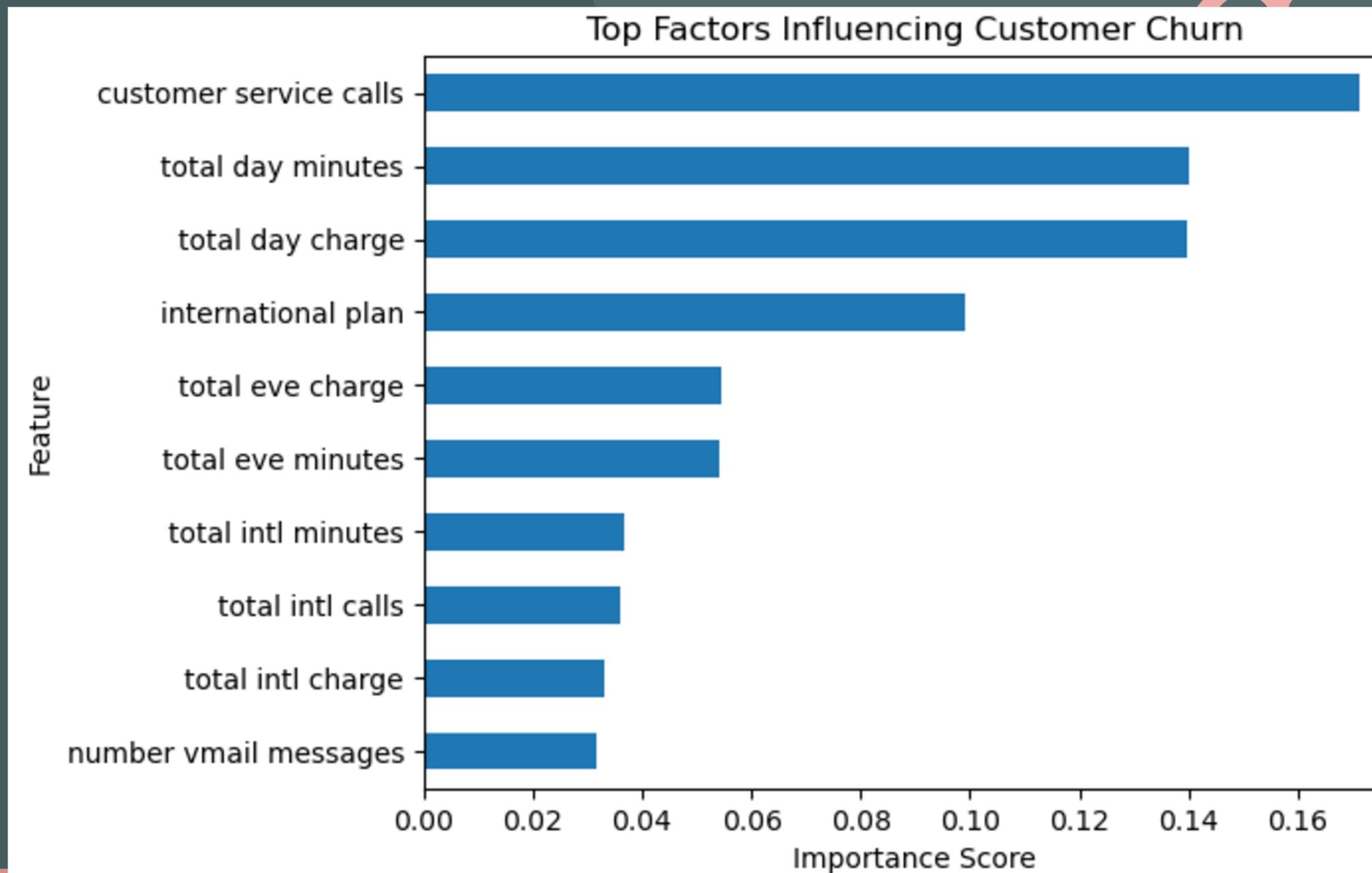


- Final model achieved 82% accuracy
- Recall for churners improved
- Model successfully identifies high-risk customers

# KEY FACTORS DRIVING CUSTOMER CHURN

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- Multiple customer service calls strongly indicate dissatisfaction
- High daytime usage and charges increase churn risk
- International charges contribute to churn



# BUSINESS INSIGHTS

- Customers with high usage costs are more likely to churn
- Repeated service issues increase churn probability
- Pricing and service quality are key retention levers



# BUSINESS RECOMMENDATIONS FOR REDUCING CHURN

- PROACTIVELY SUPPORT CUSTOMERS WITH MULTIPLE SERVICE CALLS
- INTRODUCE DISCOUNTED PLANS FOR HIGH DAY-TIME USERS
- REVIEW INTERNATIONAL CALL PRICING
- USE THE MODEL AS AN EARLY WARNING SYSTEM

# BUSINESS IMPACT

- REDUCED CHURN AND REVENUE LOSS
- MORE TARGETED CUSTOMER RETENTION STRATEGIES
- IMPROVED CUSTOMER SATISFACTION AND LOYALTY

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## LIMITATIONS & FUTURE WORK



- No customer demographics included
- Single time snapshot
- Future work:
  - Add customer tenure trends
  - Retrain the model periodically
  - SyriaTel can use this solution to retain valuable customers

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THANK YOU AND

CONTINUE