



# Executive Summary

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## Overview

Customer churn is a critical issue in the telecommunications industry, where companies face intense competition, changing customer preferences, and pricing pressures. The goal of this project is to develop a predictive model that can accurately identify customers at risk of churning, allowing businesses to take proactive measures to retain them.

## Business Problem

Reder Telecom is experiencing an increasing churn rate, which negatively impacts revenue and profitability. The company faces the following challenges:

- **Intense competition** from numerous market players.
- **Evolving customer preferences** demanding personalized, high-quality services.
- **Pricing pressures** that affect profitability and sustainability.
- **Network quality issues** leading to dissatisfaction and churn.
- **Challenges in maintaining customer loyalty.**

## Rationale

Churn prediction enables businesses to identify customers likely to leave, allowing them to implement targeted retention strategies. The benefits of this project include:

- **Cost Reduction:** Retaining existing customers is more cost-effective than acquiring new ones.
- **Revenue Growth:** Reducing churn leads to higher customer lifetime value and revenue.
- **Customer Satisfaction:** Understanding churn factors helps improve service quality.
- **Competitive Advantage:** Leveraging data analytics allows for proactive decision-making.
- **Data-Driven Strategies:** Enhancing business strategies using customer insights.







## Project Objectives

- **Develop a predictive model to identify at-risk customers.**
- **Analyze key factors influencing churn using data analytics.**

## **Key Findings**

- The analysis of Reder Telecom's customer churn dataset has uncovered key factors influencing retention. Statistical analysis and visualizations reveal that churn is not significantly skewed by demographic variables like gender and segment. A strong negative correlation between Net Promoter Score (NPS) and churn highlights the critical role of customer satisfaction, while high service interactions and late payments are linked to increased churn risk. Monthly churn rates show consistent fluctuations without clear seasonal trends. Additionally, lower customer feedback ratings correlate with higher churn, emphasizing the need for proactive customer engagement strategies to enhance satisfaction and retention.
- In summary, the data analysis underscores the critical role of customer satisfaction, service quality, and payment timeliness in influencing churn. These insights, supported by visualizations, provide a foundation for developing targeted strategies to improve customer retention.

**Recommendations: to effectively mitigate customer churn and enhance retention, Reder Telecom should implement the following strategic actions based on data-driven insights:**

	<p><b>Enhance Customer Service Quality</b></p> <p>Given the strong correlation between frequent service interactions and churn, Reder Telecom should improve customer support efficiency through enhanced training, AI-driven support tools, and an advanced CRM system to proactively manage customer concerns.</p>
	<p><b>Address Late Payments Proactively</b></p> <p>Implementing flexible payment plans, automated reminders, and incentives for timely payments can help reduce the churn risk associated with payment delays.</p>
	<p><b>Optimize Website Engagement</b></p> <p>Enhancing the user experience through a more intuitive, personalized, and responsive website can increase customer satisfaction and retention.</p>
	<p><b>Leverage Customer Feedback and NPS Monitoring</b></p> <p>Regularly track the Net Promoter Score (NPS) and establish a structured feedback loop to improve service offerings based on customer input.</p>
	<p><b>Deploy Targeted Retention Strategies</b></p> <p>Utilize predictive analytics to identify at-risk customers early and implement personalized retention efforts, such as exclusive offers and tailored service packages.</p>
	<p><b>Invest in Predictive Model Refinement</b></p> <p>Continuously improve churn prediction models by incorporating new data sources and refining analytical techniques to stay ahead of evolving customer behavior trends.</p>

