

Telecom Churn Analysis

Technical and Business Insights

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Introduction

- Objective:
 - Analyze telecom customer churn to identify factors contributing to churn and propose strategies to reduce it.
- Scope:
 - Technical data analysis and business implications.

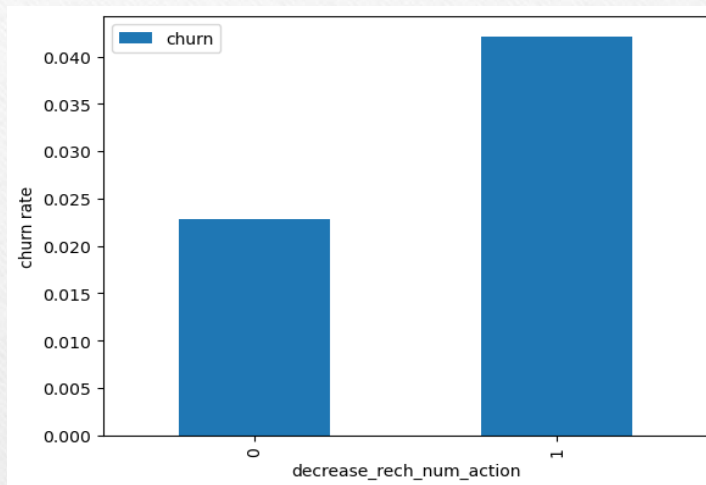
Data Overview

- Dataset Description:
 - Overview of the dataset, including number of records, features, and target variable.
- Data Source:
 - The dataset was sourced from our company's customer database, which includes records of customer demographics, service usage, and churn status.

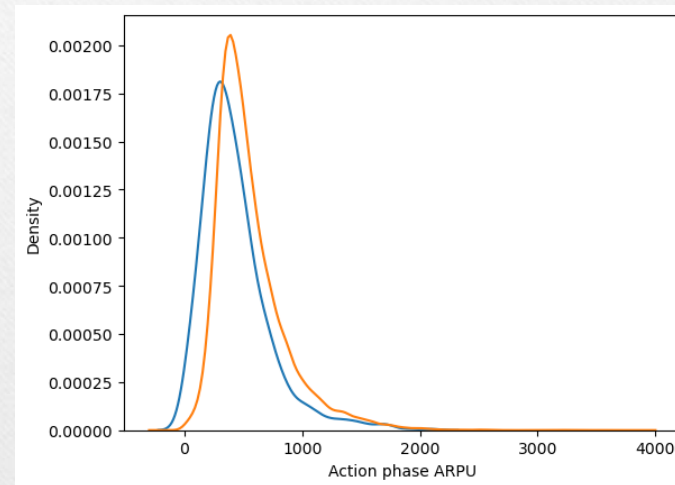
Data Preprocessing

- Steps Involved:
 - Data Cleaning
 - Handling Missing Values
 - Encoding Categorical Variables
 - Feature Scaling

Exploratory Data Analysis (EDA)

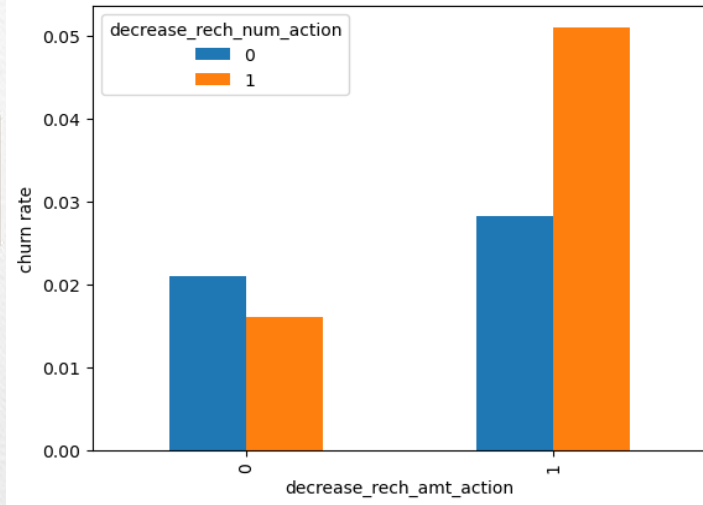


- As expected, the churn rate is more for the customers, whose number of recharge in the action phase is lesser than the number in good phase.

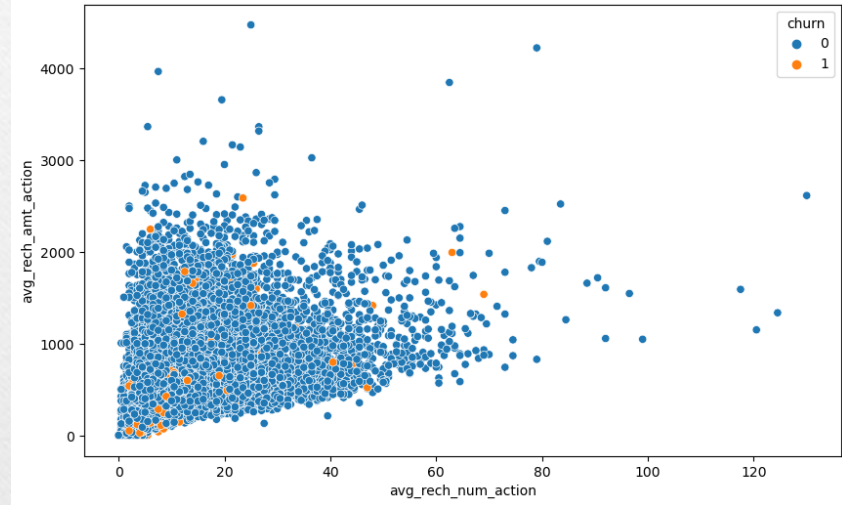


- Average revenue per user (ARPU) for the churned customers is mostly dense on the 0 to 900. The higher ARPU customers are less likely to be churned. ARPU for the not churned customers is mostly dense on the 0 to 1000.

Exploratory Data Analysis (EDA)



- We can see from the above plot, that the churn rate is more for the customers, whose recharge amount as well as number of recharge have decreased in the action phase than the good phase.



- We can see from the above pattern that the recharge number and the recharge amount are mostly proportional. More the number of recharge, more the amount of the recharge.

Predictive Modeling

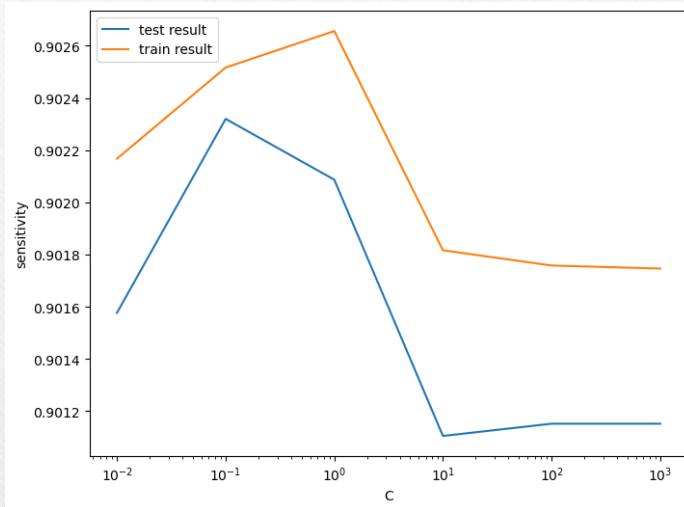


Fig: Logistic Regression Curve

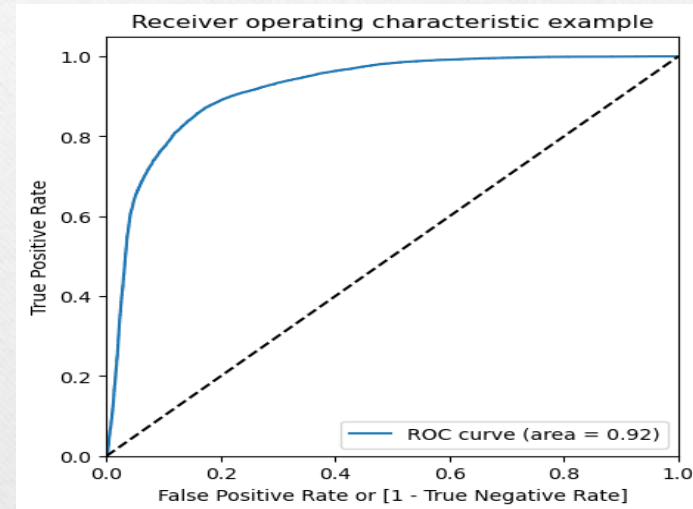


Fig: ROC Curve

Business Implications

- **Market Overview:**
 - Rapid 5G rollout and increased mobile data consumption.
 - High customer expectations for service quality.
 - Bundling of services to add value and reduce churn.
- **Competitive Analysis:**
 - Assess service offerings, pricing strategies, and customer service levels compared to competitors.
 - Identify segments where competitors are gaining market share.
- **SWOT Analysis:**
- **Strengths:** Strong brand, extensive network, innovative technology.
- **Weaknesses:** High churn rate, higher pricing, customer service areas to improve.
- **Opportunities:** Expand 5G, personalized marketing, strategic partnerships.
- **Threats:** Intense competition, regulatory changes, economic instability.

Recommendations

➤ **Strategies to Reduce Churn:**

- Implement personalized customer engagement to address individual needs.
- Enhance service quality to meet and exceed customer expectations.
- Launch targeted marketing campaigns to retain at-risk customers.

➤ **Future Steps:**

- Conduct further analysis on high-risk customer segments to understand churn drivers.
- Develop and implement retention programs tailored to specific customer needs.

Conclusion

➤ **Summary:**

- Key findings reveal the primary factors contributing to customer churn.
- Emphasized the importance of data-driven decision making to identify and address churn drivers.

➤ **Next Steps:**

- Utilize actionable insights to develop targeted retention strategies.
- Implement continuous monitoring and analysis to adapt and improve churn reduction efforts.

Q&A

➤ Invite Questions from the Audience