Customer Churn Analysis and Prediction

Power BI Internship – SaiKet Systems

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This report presents an end-to-end Power BI project developed as part of the internship at SaiKet Systems. It demonstrates the use of data analytics and visualization to understand and predict customer churn trends in a telecommunications company.

1. Introduction

The Customer Churn Analysis and Prediction project aims to identify customers who are at risk of leaving a telecommunications service provider. By leveraging Power BI, this project transforms raw data into meaningful insights that help the company take data-driven actions to improve customer retention.

SaiKet Systems is a technology company known for delivering projects in cloud computing, AI, ML, and data analytics. This internship offered the opportunity to apply Power BI for real-world analytical tasks, focusing on data transformation, visualization, and business insights.

2. Project Workflow

Step 1: Data Connection
The customer churn dataset was imported into Power BI. The dataset included customer demographics, service details, and churn information. Establishing proper connections ensured all data sources were accurately linked for dynamic reporting.

Step 2: Data Transformation
Data cleaning was performed in Power Query Editor. This involved handling missing values, correcting data types, and renaming columns. Transformations made the dataset ready for modeling and visualization.

Step 3: Dashboard Development
The Power BI dashboard was structured into four key components:
- **Churn Rate Overview:** Displayed the percentage of customers who churned using KPI and card visuals.
- **Customer Demographics:** Visualized gender, partner status, and dependent distribution using bar and pie charts.
- **Customer Tenure Analysis:** Used histograms and box plots to show tenure distribution.
- **Churn Analysis:** Showed churn by contract type, payment method, and internet service using stacked bar charts and heatmaps.

3. Key Insights & Findings

- Customers with month-to-month contracts showed a significantly higher churn rate.
- Customers using electronic check payments churned more frequently than those using automatic payments.
- Longer tenure customers were less likely to churn.
- Senior citizens and customers without dependents had slightly higher churn tendencies.

4. Learning Experience

During the Power BI Internship at SaiKet Systems, I gained hands-on experience in transforming raw data into business insights. I learned advanced Power BI functionalities such as Power Query transformations, DAX calculations, and dashboard storytelling. This project strengthened my understanding of data visualization, data cleaning, and analytical thinking for real-world business problems.

5. Conclusion

The Customer Churn Analysis dashboard provides a clear understanding of customer behavior patterns and identifies key factors influencing churn. By implementing targeted retention strategies, telecom companies can reduce churn and improve customer satisfaction. This internship project demonstrated the value of Power BI in driving data-based decision-making.

LinkedIn Post Summary

Thrilled to share my Power BI internship project with SaiKet Systems! ■

■ Project: Customer Churn Analysis and Prediction
■ Tools: Power BI, DAX, Power Query
■ Key Learnings: Data transformation, visualization, and analytical storytelling.

I’m grateful to SaiKet Systems for the opportunity to work on real-world analytics challenges and enhance my Power BI skills. Excited to continue growing as a data analyst!

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