Telecom Churn Prediction Dashboard - Project Report

Introduction

The Telecom industry is facing a challenge in retaining customers due to rising competition. This project aims to analyze customer behavior using Power BI and identify the key factors contributing to customer churn, thereby enabling telecom companies to take preventive action.

Abstract

The objective of this project is to explore and visualize customer data to understand churn patterns. A detailed dashboard was developed using Power BI, showcasing metrics like total customers, churn rate, service usage patterns, and demographic influences. The dashboard enables stakeholders to take data-driven decisions to improve customer retention and satisfaction.

Tools Used

- Power BI: For building the dashboard and data visualizations
- Microsoft Excel / CSV: For data storage and import
- DAX (Data Analysis Expressions): For creating calculated measures and KPIs
- Power Query Editor: For data cleaning and transformation

Steps Involved in Building the Project

1. Data Import: Customer dataset was loaded into Power BI from an Excel source.
2. Data Cleaning: Removed duplicates, handled null values, and standardized column names using Power Query.
3. Data Modeling: Defined relationships between tables and created necessary measures such as churn rate, total customers, and customer segmentation.
4. Dashboard Design: Developed visual elements including bar charts, donut charts, KPIs, and slicers to enable interactivity.
5. Insight Generation: Extracted key patterns such as high churn among long-tenure users or specific service types, providing actionable business insights.

Conclusion

The project successfully highlights the critical factors affecting telecom churn. With Power BI's interactive dashboards, stakeholders can easily track churn trends, identify high-risk customers, and strategize interventions. This report provides a foundation for future predictive modeling and

customer retention initiatives.