Telecom Customer Churn Prediction

A Data-Driven Approach to Retaining High-Value Customers

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Project Overview

- Business Problem: Telecom companies face high churn rates (15-25% annually).
- Objective: Predict churn among high-value customers and identify key risk factors.
- Data: Customer usage and recharge data for 4 months.
- Goal: Retain high-value customers and reduce revenue loss.

Churn Definition & High-Value Customers

- Churned Customers: No calls (incoming/outgoing) & no mobile data usage in September.
- High-Value Customers: Top 30% customers based on average recharge amount (June & July).

Key Insights from Analysis

- Customers with declining ARPU (Avg Revenue Per User) are at high churn risk.
- Drop in recharge amount over months is a key indicator of churn.
- Customers who reduce mobile data usage are more likely to churn.
- Call volume decrease over months suggests churn risk.
- Churn rate among high-value customers: ~8.6%.

Business Recommendations

- Target early churn indicators: Identify customers with declining ARPU & recharge.
- Offer special retention plans: Discounts for high-risk customers.
- Enhance mobile data plans: Incentivise data users to prevent churn.
- Engage customers with declining call volume: Personalised offers.
- Improve customer experience: Address service quality concerns.

Business Implications

- Revenue Protection: Reducing churn among high-value customers prevents major revenue loss.
- Customer Retention Strategy: Focus on proactive engagement and retention offers.
- Data-Driven Decision Making: Use analytics to tailor personalised offers.
- Competitive Advantage: Improve service quality and customer experience to differentiate.

Conclusion & Next Steps

- Successfully identified key churn indicators & high-risk customers.
- Business can proactively retain customers using tailored strategies.
- Future Improvements:
  - Implement AI-driven real-time churn prediction.
  - Explore deep learning models for better accuracy.
  - Conduct customer sentiment analysis for service improvement.