Predicting Customer Churn for a Telecom Company

Using Classification Models to Identify At-Risk Customers
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Phase 3 Data Science Project

Overview

Customer churn occurs when customers stop using a service.
Retaining customers is cheaper than acquiring new ones.
Goal: Predict churn to reduce customer loss.

Business & Stakeholder Understanding

Stakeholder: Telecom company.
Problem: Customer loss to competitors.
Importance: Improve retention and revenue.

Data Understanding

3,333 customer records.
21 features.
Target variable: Churn (Yes / No).

Why Classification?

Predicting categories, not numbers.
Customer either churns or stays.
Enables early intervention.

Modeling Approach

Data preparation.
Train-test split.
Baseline model.
Tuned model.

Model Evaluation

Primary metric: Recall.
Focus on identifying churners.
Better than random guessing.

Key Insights

High customer service calls increase churn.
International plans linked to churn.
Shorter tenure increases risk.

Recommendations

Proactively contact high-risk customers.
Improve customer support.
Offer targeted incentives.

Limitations

Based on historical data.
Customer behavior changes.
Requires regular retraining.

Next Steps

Add new data.
Test ensemble models.
Integrate with CRM.

Thank You

Questions?