SyriaTel Customer Churn

Prediction & Retention Strategy

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Overview

The Challenge
15% annual churn rate costs millions in lost revenue

Our Goal
Predict high-risk customers before they leave

Our Approach
Machine learning to identify patterns in customer behavior

Expected Impact
Save $500K+ annually through targeted retention

The Business Problem

15%

Annual Churn Rate

5-10x

Cost of acquiring new customers vs. retaining existing ones

Revenue Loss

Every lost customer represents thousands in annual revenue. With hundreds churning each month, this adds up fast.

Competitive Pressure

Customers have more choices than ever. If we don't address their concerns proactively, our competitors will.

The Opportunity

Early intervention can save relationships. We just need to know who to focus on.

Data Understanding

We analyzed customer behavior across multiple dimensions:

3,333	**19**	**483**
Customer Records	Features Analyzed	Churned Customers

Key Features Examined:

- Customer service interactions
- Usage patterns (minutes, charges)
- Plan details (international, voicemail)
- Account tenure and activity

Our Approach: Machine Learning

We tested multiple models to find the best predictor:

1 **Baseline Model**

Logistic Regression

2 **Decision Tree**

Simple interpretability

3 **Random Forest**

Best performance ✓

⚙ Optimization Strategy

- Fine-tuned hyperparameters using GridSearchCV
- Prioritized Recall metric (catching churners is critical)
- Balanced class weights to handle 15% churn rate

Model Performance

75%+

of at-risk customers correctly identified

What This Means:

✓ Out of 100 customers planning to leave, we catch 75+
✓ Early warning system before customer dissatisfaction escalates
✓ Focus retention efforts where they'll have maximum impact

Key Findings

Customer Service Calls: #1 Predictor

Customers with 4+ service calls are significantly more likely to churn

Total Charges

Higher spending customers warrant priority attention for retention

International Plan

Users on international plans show elevated churn risk

💡 **Insight: Service quality issues drive churn more than price**

Recommendations

1 **Service Recovery Protocol**

Mandatory follow-up for any customer with 3+ service calls

2 **VIP Retention Program**

Targeted perks for high-spending customers flagged by the model

3 **International Plan Review**

Investigate pricing/perks to reduce churn among international users

4 **Deploy Model in Production**

Weekly risk scoring for proactive outreach

Expected Benefit: Save 30% of at-risk customers = $500K+ annually

Next Steps

Week 1-2	Week 3-4	Month 2+
Pilot program with 100 high-risk customers	Refine model & expand to full customer base	Monitor results & iterate on retention strategies

Key Actions Required:

✓ Integrate model into CRM system
✓ Train customer service team on new protocols
✓ Design retention offers and messaging
✓ Set up monitoring dashboard for tracking results

Success Metric: Reduce churn rate from 15% to 12% within 6 months

Thank You

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