Customer Churn Prediction for SyriaTel

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Overview

The following project was meant to deal with customer churn at SyriaTel, one of the biggest telecom companies. Customer churn in general is considered one of the most serious problems influencing the revenue. The focus of our project was to develop a predictive model identifying customers who are at risk and enabling SyriaTel to take proactive steps toward their retention.

Business and Data Understanding

Customer churn means loss of revenue and enhanced expenses regarding the acquisition of new subscribers. Key questions we answered were: What drives churn? How can you predict it? We used a dataset including customer details such as service plans and usage patterns, information related to contacting various customer service channels. Understanding such variables was then important in being able to recognize trends indicating a higher probability of churning.

Modeling

Predictive Modeling Approach

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Evaluation

Model Performance and Evaluation

We evaluated our models using accuracy and recall. While accuracy gives the total number of correct predictions, recall is crucial in this domain since it shows how well we detect actual churners. The Random Forest model stood out with a recall of 79%, which would mean that this model captures the better portion of the majority of the cases where customers actually churn. It provides a reliable model with which to highlight customers that are in danger of leaving.

Recommendations

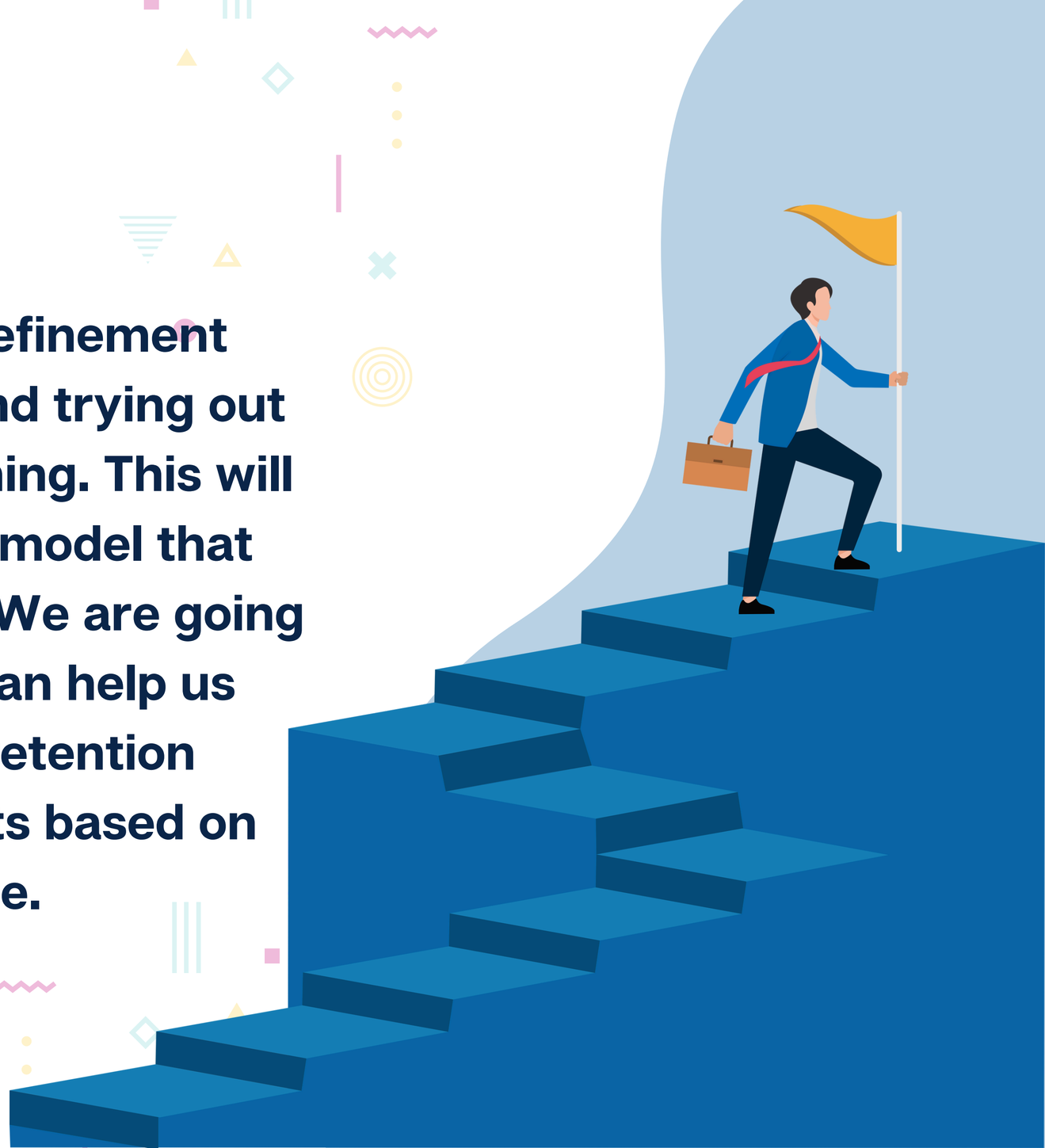
Strategic Recommendations

The findings suggest that focused marketing efforts might be made to keep customers most prone to churn, specifically those with higher charges and/or frequent calls to customer services. We would also like to provide personalized incentives to those customers to stop them from churning. Equally important, we also recommend continued monitoring of customer data as a means to update and improve our churn predictive model on a regular basis.

Next Steps

Future Directions

Moving forward, this model needs refinement through increasing the data volume and trying out new features that may influence churning. This will be a continuous improvement of the model that keeps us ahead with customer trends. We are going to implement a feedback loop that can help us measure the effectiveness of our retention strategies and thus make adjustments based on those kinds of data over time.



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