Assignment 1: Problem Statement

Team 5

OVERVIEW OF THE TOPIC

The telecom industry is booming with mobile phones and the internet, but with growth comes fierce competition, and customer churn is a major concern for telecom providers. For this reason, our team is digging deep to uncover the factors that cause customers to discontinue services so that providers can take proactive steps to retain them. Our research will offer insights that can help providers reduce lost revenue, lower customer acquisition costs, and improve customer retention.

We will be employing secondary research methods to gather data from a variety of open-source websites for this research. By using qualitative metrics like customer demographics, services used, and billing information, we aim to develop predictive models that can be used to forecast customer behavior.

PROBLEM STATEMENT

What factors influence a customer's decision of discontinuing services with a provider?

BENEFICIARIES OF THE RESEARCH

1. Service Providers: This research will give a clear insight to the service providers helping them identify the reasons for customer churn and take steps to address them.
2. Investors: Investors can use this research to assess the financial health of a company and make more informed investment decisions.
3. Customers: This research will enable consumers to make more informed decisions while choosing their service providers.
4. Marketing Professionals: Marketing professionals can use this research to better understand customer requirements thus aiding them to develop effective marketing strategies.

RESEARCH QUESTIONS

1. What are the ramifications for customer acquisition and retention tactics and how does the average customer lifetime value differ between churned and non-churned customers?
2. Can trends in the types of customer care questions or complaints that are most closely related to churn be discovered, and how can this knowledge be applied to enhance customer service?
3. What variables might be influencing these trends, and how does customer churn change among service plans or geographical regions?
4. How may customized marketing or customer retention strategies be devised for these segments? Are there particular customer segments (depending on, for example, demographics or usage patterns) that are more prone to churn?
5. How can customer churn data be used to identify opportunities for improving product or service offerings, and what factors are most strongly correlated with customer satisfaction and loyalty?
6. Can Machine learning algorithms be used to analyze factors that contribute towards the customer churn and be used to design models to predict the risk and take accurate measures to avoid it ?
7. How would feature classification vary for high value and low value customers ?
8. Could deep learning models be incorporated for customer segmentation for improving accuracy of the ML models ?
9. Can we use sentiment analysis to analyze customer behaviors and reviews to improve the customer segmentation accuracy ?
10. How much do customer loyalty plans affect the rate of customer churn and to what extent are they profitable ?

BOUNDARIES OF THE STUDY

We intend to do an analysis on the following segments for a very thorough investigation into our problem:

Demographics - Age, gender, income, education level, and other relevant consumer characteristics will be garnered and analyzed leveraging social media, customer databases, and surveys for this research. This makes it possible for us to identify patterns and trends in consumer behavior and preferences that could be connected to the churn rates.

Location - We will look at how customer churn is distributed across various geographic areas, such as cities, states, or countries, using zip codes that can be obtained from billing information or customer surveys, as well as geolocation information that can be obtained from GPS tracking or IP addresses. With the help of this, we can spot regional differences in consumer behavior as well as any elements that could affect churn rates differently depending on the location.

Services - For this study, we will investigate the various services or products that the customers are currently using and how these could be affecting the churn. Customer surveys and competitive research are two ways that we will go about to gather this data. Building targeted retention strategies can be aided by knowing, for instance, which features or services are contributing to higher levels of churn.

Customer status - Examining the customers' account status or subscription level, is the core requirement for this study. To better understand the status of the customer and its effect on churn, we can gain important data from customer service logs, surveys, and subscription purchase histories. There may be circumstances when customers at a particular subscription level are more inclined to churn than others. For specific customer groups, this can be utilized to customize retention methods.

IMPORTANCE OF THIS RESEARCH

This research is important for a variety of stakeholders, including service providers, investors, customers, and marketing professionals. The research questions aim to identify specific factors that influence customer churn, such as customer lifetime value, geographic region, service plans, and customer segments. These insights can help providers improve their product or service offerings by informing the development of targeted marketing and customer retention strategies.

Overall, this research can provide valuable insights into the telecom industry, which can help various stakeholders develop effective strategies to reduce customer churn and improve customer retention. Customer churn is a major concern for telecom providers, and understanding the factors that contribute to it can assist them in taking proactive measures to reduce churn. The research can benefit investors by providing them with insights into the financial health of telecom companies, allowing them to make more informed investment decisions. Customers will benefit from this research as well, as they will have a better understanding of the reasons for churn, allowing them to make more informed decisions when selecting service providers. Finally, marketing professionals can

benefit from this research by applying the findings to develop more effective marketing strategies and better understand customer needs.

This research has several applications:
1. The impact of customer service on customer retention: Research could investigate the relationship between customer service metrics such as response time, resolution time, and satisfaction ratings and churn rates.
2. The role of pricing and promotions in customer retention: More research could be conducted to determine how pricing and promotional strategies affect churn rates and customer lifetime value.
3. The efficacy of retention strategies: Research could look into the effectiveness of various retention strategies, such as loyalty programs, personalized offers, and proactive outreach, and assess their impact on churn rates.
4. The impact of technological advancements on customer retention: Research could look into how emerging technologies such as 5G and the Internet of Things affect customer behavior and retention.
5. The role of customer feedback in retention: Future research could look into how telecom providers can effectively collect and use customer feedback to improve their services, reduce churn rates, and increase customer retention.

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