**Customer Churn Prediction – Phase 1**

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**PROBLEM STATEMENT:**

The project involves using IBM Cognos to predict customer churn and identify factors influencing customer retention. The goal is to help businesses reduce customer attrition by understanding the patterns and reasons behind customers leaving. This project includes defining analysis objectives, collecting customer data, designing relevant visualizations in IBM Cognos, and building a predictive model.

**DESIGN THINKING:**

**1.) Analysis Objectives**:

Using IBM Cognos, the specific objectives for predicting customer churn are:

Churn Prediction Model: Develop a predictive model within IBM Cognos to identify customers at risk of churning.

Churn Risk Score: Assign a churn risk score to each customer, facilitating targeted retention efforts.

Segmentation: Segment customers based on their churn risk levels for customized retention strategies.

Key Churn Drivers: Identify and visualize the primary factors contributing to customer churn using IBM Cognos analytics.

Retention Recommendations: Generate actionable insights and recommendations for retention strategies within the IBM Cognos environment.

Model Validation: Evaluate and validate the performance of the churn prediction model using IBM Cognos tools and visualizations.

**2.) Data Collection:**

We will be using the dataset provided by kaggle.com to carry on this project

[**https://www.kaggle.com/datasets/blastchar/telco-customer-churn**](https://www.kaggle.com/datasets/blastchar/telco-customer-churn)

The above dataset contains necessary data like day, date etc. It also contains number of unique visits, first visits and returning visits which will be very helpful for us to enhance the user experience by identifying what they need the most.

**3.) Visualization Strategy:**

Visualization is a powerful tool in understanding customer churn data and conveying insights effectively. Here are some visualization strategies to consider when working with customer churn data:

Churn Rate Trends:

Line charts or time series plots can show how churn rates have evolved over time.

Compare churn rates among different customer segments using stacked area charts or grouped bar charts.

Customer Segmentation:

Create pie charts, bar charts, or treemaps to visually represent customer segments based on churn risk levels or demographics.

Use heatmaps to display correlation between different customer attributes and churn.

Customer Journey Mapping:

Flowcharts or Sankey diagrams can illustrate the customer journey, highlighting touchpoints where churn is more likely to occur.

**4.) Insights Generation:**

Generating insights from customer churn prediction is crucial for businesses to understand why customers leave and to develop effective strategies to mitigate churn. Here are some insights that can be generated from customer churn prediction:

**Identifying Churn Drivers:**

By analyzing predictive models, businesses can identify the key drivers that lead to customer churn. These drivers may include factors like pricing changes, poor customer service experiences, or competitive pressures. Understanding these drivers is essential for addressing the root causes of churn.

**Segmentation of Churned Customers:**

Churned customers can be segmented based on various characteristics such as demographics, purchase history, or engagement level. This segmentation helps in tailoring retention strategies to specific customer groups. For example, different strategies may be needed for high-value customers compared to occasional shoppers.

**Churn Prediction Timelines:**

Insights can reveal when customers are most likely to churn. This could be immediately after a negative experience or after a certain period of inactivity. Businesses can use this information to time their retention efforts effectively.

**Loyalty and Engagement Patterns:**

Analyzing churn data can uncover patterns related to customer loyalty and engagement. For instance, it may reveal that customers who engage with a loyalty program are less likely to churn. Businesses can use these insights to incentivize customer engagement.

In summary, generating insights from customer churn prediction is a multifaceted process that involves understanding the reasons behind churn, segmenting customers, analyzing behavior patterns, and using these insights to develop proactive retention strategies. These insights empower businesses to reduce churn rates, enhance customer satisfaction, and drive sustainable growth.

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