College code:7177

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CUSTOMER CHURN PREDICTION USING DATA ANALYCTICS WITH COGNOS

PROJECT TITLE :

Predictive customer churn analysis with IBM Cognos.

PROJECT OVERVIEW :

The project at hand revolves around harnessing the capabilities of IBM Cognos to address a critical business challenge – predicting customer churn and enhancing customer retention strategies. The overarching goal is to empower businesses with the means to reduce customer attrition by gaining deep insights into the underlying patterns and drivers of customer departures.

ABSTRACT :

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.

PROJECT OBJECTIVES :

- Churn Prediction
- Comprehensive Understanding
- Visual Insights
- Data-Driven Decisions

KEY STEPS :

- Data collection and preprocessing
- Advanced analytics
- Predictive modeling
- Visual storytelling
- Recommendations and actionable insights

ANALYSIS OBJECTIVES :

- Develop a predictive model to detect potential churners proactively with high prediction accuracy.
- Identify, quantify churn drivers, segment customers by churn likelihood and behavior, and customize retention strategies for each segment.

- Provide actionable insights and recommendations based on the analysis and utilize visualization tools like IBM Cognos to present findings clearly.
- Establish continual monitoring and improvement processes to adapt to changing conditions.

DATA COLLECTION :

- Gather historical customer data, including customer profiles, transactional data, usage logs, and ensure data quality and uniformity by cleaning and preprocessing the data.
- Perform EDA to understand the characteristics of customers who have churned and visualize churn rates over time and explore patterns or seasonality.
- Select relevant features that can help predict churn that includes customer age, location, gender, usage behavior like frequency of interactions, purchase history and customer satisfaction scores.
- Split the dataset into training and testing sets and train the predictive model on the training data and validate it using the testing data.

VISUALIZATION STRATEGY :

- Create visually appealing dashboards and reports using IBM Cognos.
- Present insights, including identified churn patterns, key factors, and predictive model results.

PREDICTIVE MODELING :

- Assess the model's performance using appropriate evaluation metrics.
- Validate the model's generalizability on the testing data.
- Assess the model's performance using relevant metrics: Accuracy , Precision , Recall.
- Provide actionable recommendations to reduce customer churn based on the findings.
- Continuously monitor and update the model to adapt to changing customer behavior.

CONCLUSION :

This project combines cutting-edge analytics, innovative strategies, and ethical considerations to address the critical challenge of customer churn. The outcome will empower businesses with actionable insights and personalized retention strategies, ultimately fostering long-term customer loyalty and profitability.