

Project 6: Customer Churn Prediction

Project Definition: 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

Analysis Objectives

In our quest to predict customer churn, we have two primary goals:

1. **Identify Potential Churners:** Our aim is to create a system capable of foreseeing which customers are likely to leave our service soon.
2. **Unearth Key Factors:** We intend to uncover the core factors responsible for customer churn. This means delving into the reasons why customers choose to discontinue their use of our services.

Data Collection:

To gather the essential customer data, our approach includes:

1. **Customer Demographics:** We will gather information about our customers, including details such as age, gender, location, and other pertinent demographic data.
2. **Usage Behavior Tracking:** We will meticulously document how frequently customers engage with our services, their preferred features, and the duration of their engagement.
3. **Historical Interactions Archive:** We will maintain a comprehensive record of past customer interactions, encompassing inquiries, complaints, and any feedback they've shared.

Visualization Strategy:

Our strategy for presenting insights through IBM Cognos encompasses two key aspects:

1. **Illustrating Churn Factors:** We will craft visually appealing representations, such as charts and graphs, to elucidate which factors wield the most significant influence on customer churn. This will provide businesses with a clear understanding of the primary drivers.
2. **Shining a Spotlight on Retention Rates:** Through visualizations, we will showcase the company's effectiveness in retaining customers over time, offering insights into retention rate trends and comparisons.

Predictive Modeling:

For our customer churn prediction, we will undertake the following steps:

1. Selecting Machine Learning Algorithms: We will carefully choose the most suitable machine learning techniques, including options like logistic regression, decision trees, or neural networks, to construct predictive models.

2. Feature Selection: We will make informed decisions regarding which customer attributes, such as usage frequency and demographics, should serve as inputs for the predictive model. These chosen features will empower the model to make accurate forecasts of churn.

Through these endeavors, our objective is to equip businesses with actionable insights and a predictive toolset that empowers them to proactively combat customer churn, ultimately resulting in enhanced customer retention and sustained business prosperity.