PROBLEM STATEMENT

In the modern banking industry, customer retention is one of the most pressing challenges. With the rapid digital transformation of financial services and the increasing number of competitors offering similar products, customers can easily switch banks in search of better rates, convenience, or service quality. This phenomenon, known as customer churn, directly impacts a bank's revenue, profitability, and brand trust. Acquiring a new customer often costs several times more than retaining an existing one, making churn prevention both a strategic and financial necessity.

Despite having access to large amounts of customer data — such as demographics, account balances, service usage, and transaction histories — many banks struggle to convert this raw information into actionable insights. Traditional analysis methods often fail to capture complex interactions between customer behaviors and churn decisions, leading to reactive rather than proactive management of customer relationships.

This project seeks to address this challenge by developing a Bank Customer Churn Prediction Model using the CHAID (Chi-squared Automatic Interaction Detector) Decision Tree algorithm in IBM SPSS Modeler. By analyzing historical customer data, the project aims to identify the key variables and behavioral patterns that drive customer attrition. The model not only predicts which customers are likely to churn but also explains why providing transparent, rule-based insights that can guide strategic decision-making.

Ultimately, this solution empowers banks to anticipate churn before it occurs, design personalized retention campaigns, optimize customer engagement, and minimize revenue loss turning predictive analytics into a tangible competitive advantage in the real-world financial landscape.
