CUSTOMER\_CHURN\_ANALYSIS\_PROJECT

**Overview:**

Customer churn analysis is a crucial process for businesses aiming to understand why customers leave and to identify strategies to retain them. It involves analyzing historical data to uncover patterns and factors that contribute to customer attrition. By understanding these factors, companies can implement targeted interventions to reduce churn rates and enhance customer loyalty.

**Problem Statement:**

In the context of customer churn analysis, the primary problem is to determine which customers are likely to churn (i.e., discontinue using a product or service) and understand the underlying reasons behind their decision.

 **What is the overall churn rate for the company, and how has it changed over time?**

* Helps to understand the current state of customer retention and historical trends.

 **Which customer segments (e.g., by age, gender, location) have the highest churn rates?**

* Identifies if certain demographic or geographic groups are more prone to churn.

 **What are the common characteristics or behaviors of customers who churn?**

* Aims to find patterns in the data that may indicate why customers are leaving.

 **What are the main reasons cited by customers who have churned, based on feedback or survey data?**

* Provides qualitative insights into customer dissatisfaction or issues.

 **How does customer engagement (e.g., frequency of usage, interaction with customer support) correlate with churn rates?**

* Examines if reduced engagement is a predictor of churn.

 **Are there any specific features or services associated with higher churn rates?**

* Determines if particular aspects of the product or service contribute to customer attrition.

 **What impact do promotional offers or discounts have on reducing churn?**

* Evaluates the effectiveness of retention strategies and promotions.

 **How do customer satisfaction scores or Net Promoter Scores (NPS) relate to churn rates?**

* Assesses if lower satisfaction or NPS is linked to higher churn.

 **What predictive models can be developed to accurately forecast customer churn?**

* Focuses on creating and validating models to predict which customers are at risk.

 **What are the financial implications of customer churn, and how can the company measure the cost of acquiring new customers versus retaining existing ones?**

**Data Dictionary**

* **customer\_id**: This is the customers’ unique id which identifies them bankwide.
* **credit\_score:** this is the rating of the customers’ credit worthiness, generated based on the information on their credit report.
* **country**: This is the country the customer hails from.
* **gender**: This is the sex of the customer, grouped into male and female.
* **age**: This refers to the customer’s age.
* **tenure**: The number of years of relationship this customer has maintained with the bank.
* **balance:** The deductible balance on their bank account as at time this data was generated.
* **products\_number:** This shows the bank account type the customer has.
* **credit\_card:** This column shows if a customer has a credit card or not, represented as either 1 or 0 respectively.
* **active\_member:** These numerical values show whether an account is active or not, represented as either 1 or 0 respectively.
* **estimated\_ salary**: This is the average annual salary received into the account.
* **churn:** This field shows if the customer is still with the bank or not, represented by either 0 or 1 respectively.