**SUMMARY:**

**Use Case – Customer Retention Strategy for Banks**

**Customer Churn Defined:** The rate at which customers discontinue their relationship with a bank.

**Challenge:** High churn rates affect profitability and long-term stability.

**Solution:** Leverage data insights to predict and reduce churn through proactive strategies.

**Goal:** Identify and engage with at-risk customers before they leave.

**Impact:** Builds customer loyalty, reduces churn, and drives sustainable revenue.

**Enable Proactive Engagement:** Allow banks to act on insights and retain customers.

**Outcome:** Higher retention rates and improved customer satisfaction.

**Dataset Overview:**

**Demographics:** Age, Geography, Gender

**Financial Information:** Credit Score, Balance, Salary

**Account Details:**Tenure, Number of Products, Active Membership

**Target Variable:** `Exited` - 1 if the customer has churned, 0 if they remain**.**

**Steps Followed:**

Preprocessed the Data.

Since the output from the dataset is binary, used Logistic Regression.

Used Sigmoid Function.

Accuracy from this model is 75.28%

**Benefits of Churn Prdecition:**

**Enhanced Customer Loyalty:** Identify potential churners and engage with tailored incentives.

**Revenue Growth:** Retain revenue from existing customers, reducing acquisition costs.

**Product Development:** Develop products that better match customer needs based on churn insights.

**Keypoints:**

* Predictive churn analysis enables banks to engage at-risk customers, improving loyalty and revenue.
* Done Preprocessing the data and applied Logistic Regression.
* Used Sigmoid Function.
* Reducing churn ensures a stable customer base and sustained growth.
* Data-driven strategies in customer retention foster long-term success.
* A proactive retention strategy differentiates banks in a competitive market.