**Bank Customer Churn Dashboard**

**Project Overview**

This project presents a **Bank Customer Churn Dashboard** created using **Tableau** and **Python** to analyze and visualize factors contributing to customer churn in a bank. The dashboard is designed to help business stakeholders quickly identify patterns and trends in customer behavior, especially those leading to churn.

[<https://public.tableau.com/app/profile/yu.wu1970/viz/BankCustomerChurnDashboard_U/Dashboard1>]

It includes:

* Overall churn rate
* Customer demographics breakdown (age, gender, geography)
* Financial metrics (account balance, credit score, AUM, estimated salary)
* Top 5 features influencing churn based on machine learning feature importance

**Key Insights**

* **Churn Rate**: 20.4% of customers have churned.
* **Age** are the most influential features for churn.
* Customers aged 35 to 45 have a higher likelihood of churn.
* Customers in certain geographies (e.g., Germany) exhibit higher churn rates.

**Tools Used**

* **Tableau**: For data visualization and dashboard creation
* **Python (Jupyter Notebook)**: Analyzes feature importance using Random Forest and correlation methods to identify the most impactful variables contributing to customer churn.

**How to Use**

1. Open the Tableau workbook (.twbx) using Tableau Desktop or Tableau Public.
2. Interact with the filters (Gender, Geography, Age, etc.) to explore churn patterns.
3. Review the TOP5 features for churn.ipynb to understand how feature importance was calculated.

**Use Cases**

* Identify at-risk customers and tailor retention strategies.
* Segment customers by demographic and financial behavior.
* Communicate data-driven insights with business stakeholders.

**Contact**

Created by YU WU GitHub: <https://github.com/YUW-GH/bank-customer-churn-analysis>