**TechnoEdge Banking Analytics Dashboard Project**

**About the Project**

This project involves building a comprehensive Power BI dashboard that analyzes the banking details of TechnoEdge customers. The dataset includes customer demographics, banking information such as account types and balances, loan details, and geographic distribution. The dashboard aims to provide actionable insights into customer behavior, preferences, and financial products usage.

**Dataset**

* Contains 250 rows and 19 columns with customer data fields including Customer ID, Name, Gender, Age, Country, State, Job Classification, Marital Status, Account Type, Date Joined, Balance, House Loan, and Other Loan details.
* The dataset combines customer demographic and transactional banking information, enabling detailed segmentation and analysis.

**Project Requirements**

* Strong knowledge in data visualization and analytics concepts.
* Proficiency in Power BI tools: Power Query, Power Pivot, DAX, and report publishing.
* Understanding of data cleaning, modeling, and ETL processes.
* Capability to collaborate with stakeholders to gather feedback and refine insights.

**Key Objectives**

* Analyze age distribution and identify common age groups.
* Compare average balance by gender to detect disparities.
* Identify top states and countries by customer count and their contribution percentages.
* Examine correlation between job classification and presence of loans.
* Compare housing loan ownership by marital status.
* Determine the most popular account types and their customer percentages.
* Explore how length of relationship correlates with account balance.

**Suggested KPIs**

* Total Customers: Count of unique customers.
* Total Bank Balance: Aggregate sum of balances in all accounts.
* Average Customer Age: Mean age of customers.
* Customers with House Loan: Count with housing loans.
* Customers with Other Loan: Count with other loans.
* Most Common Account Type: The account type held by the largest group.

**Dashboard Chart Ideas**

| Chart Type | Purpose / Insight |
| --- | --- |
| Bar Chart | Visualize distribution of account types. |
| Pie Chart | Show gender distribution across customers. |
| Donut Chart | Highlight job classification proportions. |
| Map Chart | Geospatial view of customers by state/country. |
| Column Chart | Compare house vs other loan holders side-by-side. |
| Line Chart | Track new accounts created over time. |

**Tools & Techniques**

* Data Cleaning: Power Query for removing duplicates, correcting data types, and handling missing data.
* Data Modeling: Establishing relationships between customer and bank datasets using Customer ID.
* DAX: Measures for counts, averages, and custom calculations.
* Visualization: Using cards, slicers, bar/pie/donut charts, maps, and line charts for diverse insights.
* Publishing & Sharing: Power BI Service to publish reports for collaboration.