Hello Bank Dashboard

Understanding of risk analytics in banking and financial services

Problem Statement

Developed a basic understanding of risk analytics in banking and financial services and understand how data is used to minimise the risk of losing money while lending to customers.

Solution

This personal project leverages Power BI dashboards to drive intelligent loan approval decisions. The solution uses advanced analytics to assess applicant profiles and accurately predict repayment likelihood, transforming traditional loan processes into a streamlined, data-driven operation.

About Dataset

This dataset basically contains information about bank details ,various client details which consists of multiple tables which are interlinked with each other through keys like primary key and foreign key. The various tables are Banking Relationship, Client-Banking, Gender, Investment Advisor and Period.

Data Cleaning Data Cleaning & Analytics Project

MONTH YEAR

A comprehensive banking data analysis project utilizing Python, SQL, and Power BI for data transformation and visualization. This personal project demonstrates end-to-end data processing from raw dataset to actionable insights.

Calculated Functions Used in Powerbi

Sum

This function will add all the numbers in a column and the column contains numbers to sum. It returns a decimal number.

Syntax : Sum= SUM()
Example: Bank Deposit = SUM('Clients - Banking'[Bank Deposits])

DistinctCount

Counts the number of distinct values in a column

Syntax: DISTINCTCOUNT()
Example : Total Clients = DISTINCTCOUNT('Clients - Banking'[Client ID])

Sumx

Returns the sum of an expression evaluated for each row in a table.

Syntax: SUMX(,) Example : Total Fees = SUMX('Clients - Banking' , [Total Loan] * 'Clients - Banking'[Processing Fees])

Calculated Functions Used in Powerbi

Switch

Evaluated an expression against a list of values and returns one of multiple possible result expressions

Syntax:SWITCH(<expression>,<value>,<result>[,<value,>,<result>].....[<else>]

Sumx

DATEDIFF : Returns the number of interval boundaries between two dates.

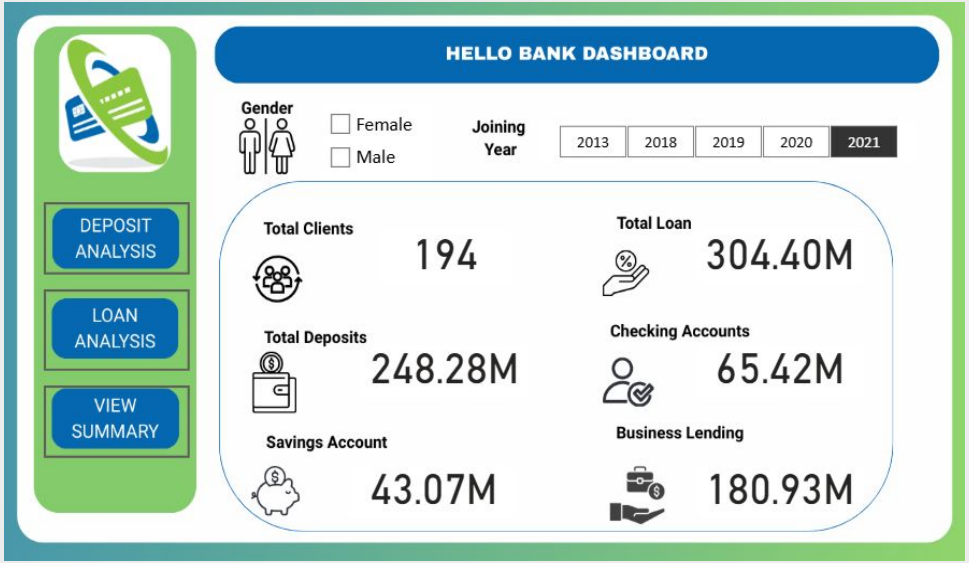
Syntax : DATEDIFF(, ,)
Banking Dashboard Example : Engagment Days = DATEDIFF('Clients - Banking'[Joined Bank],TODAY(), DAY)

Banking Dashboard Overview

This dashboard is an interactive overview of Hello Bank's key metrics. It provides real-time insights into financial performance and client data.

Key Takeaways:

- **Total Clients:** 194
- **Total Loans:** $304.40 million
- **Total Deposits:** $248.28 million
- **Detailed Breakdown:** Shows deposits by account type (Checking and Savings) and a significant focus on Business Lending.
- **Interactive Filters:** Allows filtering by gender and joining year for deeper client analysis.



Loan Analysis Dashboard

Risk Assessment

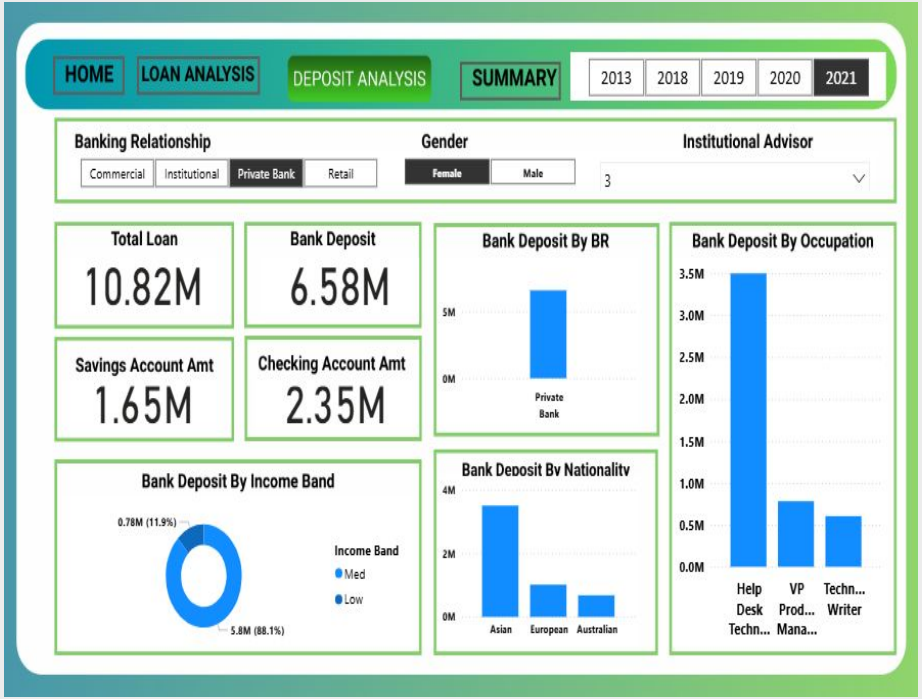
Visual breakdown of loan performance by risk category and customer demographics

Portfolio Distribution

Geographic and temporal analysis of loan disbursements and collections

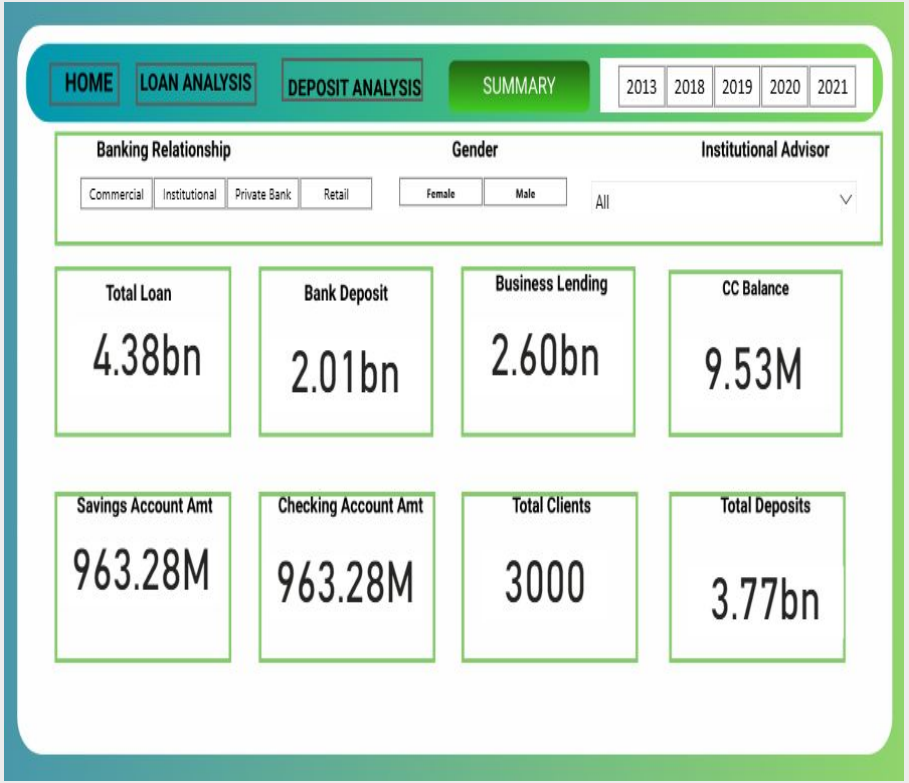
Deposit Analysis Dashboard

Comprehensive analysis of banking deposits showcasing customer deposit behaviors and account type preferences across different customer segments.



Executive Summary Dashboard

This summary provides actionable insights for strategic planning, highlighting performance against targets and identifying opportunities for business growth and operational improvement.



Project Implementation Workflow

Data Acquisition

Downloaded comprehensive banking dataset from Kaggle containing customer transactions, loan records, and deposit information for analysis.

Database Setup

Imported and structured the raw data into MySQL database, establishing proper relationships and indexing for optimal query performance.

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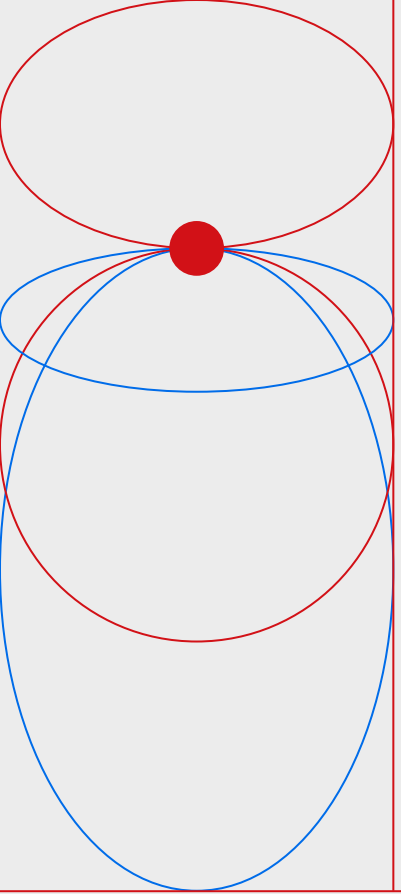
Exploratory Data Analysis

Conducted thorough EDA using Python libraries (pandas, matplotlib, seaborn) to identify patterns, outliers, and data quality issues.

Dashboard Development

Built interactive Power BI dashboards with advanced DAX calculations, custom visualizations, and user-friendly navigation for stakeholder access.



Thank you