# Tech Saksham

Case Study Report

## Data Analytics with Power BI

# Real-Time Analysis of Bank Customers

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# ABSTRACT

In the Digital Life, Data is one of the best and valuable assets for every field. But also, in the Banking Sector it is most important thing in generating new ideas or plans or decisions. In this view we had to get a most important topic called analytics, it has played a huge role in every decision-making situation.

In this section we have to analyze the customers data in Realtime Environment and Making a Better Insights of new Decisions. In this analyze we particularly use software called Power BI, using this software we can get a data-driven exploration of customers.

In these analytics we analyze the customers behaviors , preferences, transactions, age, gender ,etc. This project will also contribute to increasing innovations, profits, efficiency and many more.

# INDEX

# CHAPTER 1

# INTRODUCTION

## 1.1 Problem Statement

In numerous sectors, the efficiency of customer behavior and preferences poses a significant challenge. This issue is particularly pronounced in the Banking Sector, where it profoundly impacts banking history. Traditional data analysis struggles to keep pace with the rapidly evolving trends, proving to be time-consuming and inadequate in offering insightful solutions to address this challenge.

## 1.2 Proposed Solution

The proposed solution involves leveraging cutting-edge software to develop insightful real-time analytics. In this project, we employ one of the most powerful analytical tools, Power BI. With Power BI, we create real-time dashboards of bank customer data, enabling us to analyze customer preferences and tailor the user experience accordingly.

## 1.3 Feature

- **Real-Time Analysis:** The dashboard will provide a real-time analysis of customer data
- **Customer Segmentation:** It will segment customers based on various parameters like age, gender, behavior, etc.
- **Predictive Analysis:** It will use previous data to forecast the customer behavior.
- **Trend Analysis:** The dashboard will display the trends of customer behavior.

## 1.4 Advantages

- **Data-Driven Decisions:** Banks can make insightful decisions with real-time data.
- **Increased Efficiency:** From the analytics the we can get the efficiency of handling the customer's data.
- **Increased Revenue:** By Identifying the flaws, we can grow the trust of customers and increasing the revenue.

## 1.5 Scope

- The Scope of the project is widely used for all sector other than banking.
- This project can be extended for more data resources.
- We can also build stronger analytics with data.

# CHAPTER 2

# SERVICES AND TOOLS REQUIRED

## Tools:

- **Power BI:** The main tool for this project Power BI, which is use to create interactive dashboards for real-time data visualization.

- **Power Query:** This is a data connection technology that enables you to discover, connect, combine, and refine data across a wide variety of source.

## Software Requirements:

- **Power BI Desktop:** This is a windows application that you can create reports and publish them to Power BI.

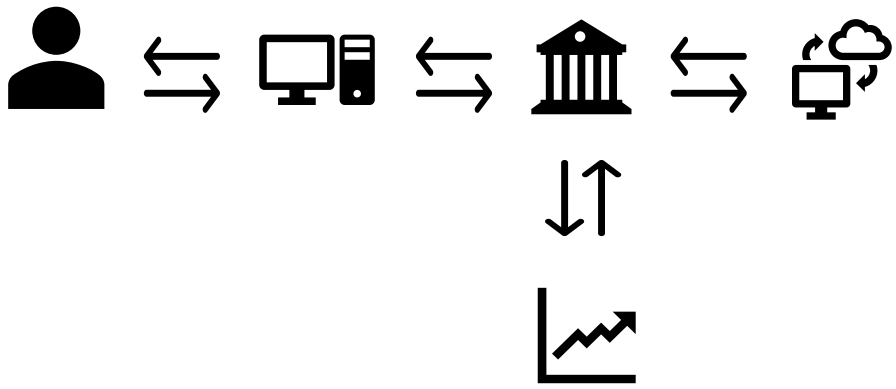
- **Power BI Service:** This is an Online SaaS (Software as a Service) Service that you use to publish reports, create new dashboards, and share insights.

- **Power BI Mobile:** This is a mobile application that you can use to access your reports and dashboards on the go.

# CHAPTER 3

# PROJECT ARCHITECTURE

## 3.1 Architecture



- **Data Collection:** Real-time customer data collected from various sources(transactions, web interaction).
- **Data Storage:** Collected Data is stored in database and Servers.
- **Data Processing:** Non sensitive data is processed to take analysis.
- **Analytics :** Processed Data is analyzed by experts.

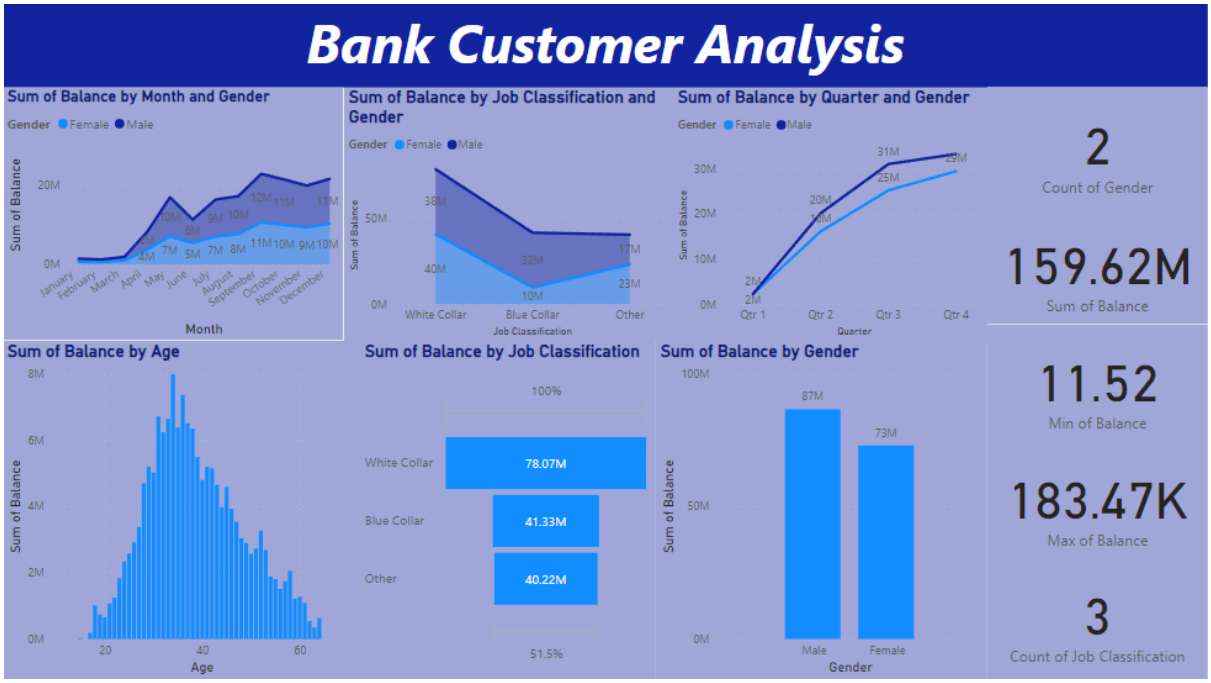
# CHAPTER 4

# MODELING AND RESULT

## Manage Relationship

In this Project CSV file with name ‘Real-Time Analysis of Bank Customers’ is added for analytics.

## Dashboard



# CONCLUSION

The project "Real-Time Analysis of Bank Customers" utilizing Power BI has been successfully completed, and we have drawn significant insights from our dashboard.

The real-time data has yielded a wealth of valuable information for our insightful analytics regarding customer behavior and preferences, thereby enhancing our ability to improve customer experiences on a personalized level.

This endeavor has bolstered our capacity to deliver efficient services to our customers. Moreover, it underscores the importance of simplifying complex data into easily understandable terms.

The presented data is not only comprehensive but also visually appealing, facilitating better comprehension.

# FUTURE SCOPE

The potential for future development in this project is extensive. By harnessing advanced analytics and machine learning, Power BI can be utilized to forecast future trends by analyzing historical data.

As data privacy and security continue to gain prominence, upcoming phases of this project should prioritize the implementation of rigorous data governance strategies.

This would guarantee the secure management of sensitive customer information while adhering to stringent data protection regulations. Additionally, the project could explore incorporating real-time data streams to deliver even more efficient insights.

Such advancements have the potential to revolutionize the interaction between banks and their customers, ultimately fostering enhanced customer satisfaction.

## REFERENCE

https://powerbi.microsoft.com/en-us/desktop/

## LINK

https://github.com/RamKingStar6/NM-Report