

BANK MARKETING PERFORMANCE ANALYSIS DASHBOARD BY USING TABLEAU

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1.INTRODUCTION

This **Bank Marketing dataset** containing information on **4,521 customers** collected during direct marketing campaigns conducted by a financial institution. The primary objective of this analysis is to understand customer demographics, financial behavior, and campaign performance, and to identify factors influencing customer responses to marketing efforts.

The dataset includes key attributes such as **age, job type, marital status, education level, account balance, housing and personal loans**, as well as **campaign-related details** like contact type, duration of interaction, number of contacts, and outcomes of previous campaigns. These variables provide valuable insights into customer segmentation and engagement patterns.

Using **Tableau's interactive visualizations**, this report explores trends and relationships across customer profiles, campaign effectiveness, and response outcomes. The dashboards enable stakeholders to quickly identify high-performing segments, evaluate marketing strategies, and support data-driven decision-making to improve future campaigns.

2.DATASET DESCRIPTION

COLUMN NAME	DATA DESCRIPTION	DATA TYPE
Age	Age of customer	Integer
Job	Job of customer	Object
Marital Status	Customers Marital Status	Object
Education	Customers Education	Object
Default	Loan Default	Object
Balance	Bank A/c Balance	Integer
Housing	Housing Loan	Object
Loan	Personal Loan	Object
Contact	Type of Contact	Object
Day	Day	Integer
Month	Month	Object
Duration	Call Duration	Integer
Campaign	Marketing Campaign	Integer
P days	Previous Days	Integer
Previous	Contacted in Previous Campaign	integer
P outcome	Previous Campaign Outcome	Object
Y	Campaign Result	Object

Dataset Source :- Kaggle

Total Columns :- 17 Total

TOTAL Rows :- 4521

3. DATA CLEANING AND PREPROCESSING

1. IMPORTED DATASET USING IN TABLEAU

test (2) (1).csv 17 fields 4521 rows 100 rows

Name	Type	Field Name	Physical Table	Remote Field Name	#	Age	Job	Marital	Education	#	Default	Balance	Housing	Loan	Cont
test (2) (1).csv					30	unemployed	married	primary	no	33	no	1,787	no	no	cellul
					33	services	married	secondary	no	35	no	4,789	yes	yes	cellul
					35	management	single	tertiary	no	30	no	1,350	yes	no	cellul
					30	management	married	tertiary	no	59	no	1,476	yes	yes	unkn
					59	blue-collar	married	secondary	no	35	no	0	yes	no	unkn
					35	management	single	tertiary	no	35	no	747	no	no	cellul

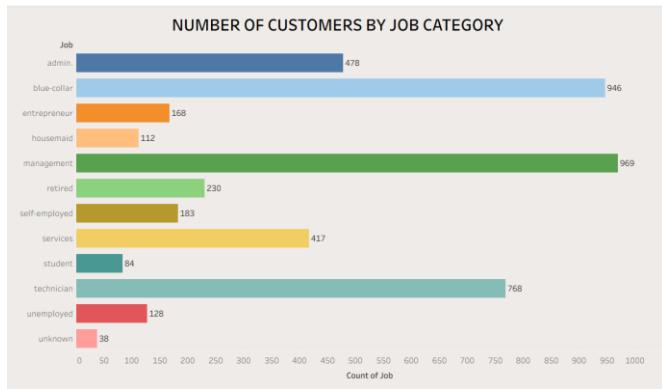
2. Rename

The screenshot shows the Tableau Data Source pane. On the left, a list of fields includes 'Age', 'Balance', 'Campaign', 'Duration', 'Pdays', 'Previous', and 'test (2) (1).csv (Count)'. In the center, there are four icons: 'Automatic', 'Color', 'Size', and 'Detail'. On the right, another list of fields includes 'Age', 'Balance', 'Campaign', 'Duration', 'Pdays', 'Previous', and 'test (2) (1).csv (Count)'. The 'Marriage Status' field is highlighted with a blue oval. A tooltip at the bottom right says 'Drop field here'.

The screenshot shows the Tableau Data Source pane. On the left, a list of fields includes 'Age', 'Balance', 'Campaign', 'Duration', 'Pdays', 'Previous', and 'test (2) (1).csv (Count)'. In the center, there are four icons: 'Automatic', 'Color', 'Size', and 'Detail'. On the right, another list of fields includes 'Age', 'Balance', 'Campaign', 'Duration', 'Pdays', 'Previous', and 'test (2) (1).csv (Count)'. The 'Housing Loan' field is highlighted with a blue oval. A tooltip at the bottom right says 'Drop field here'.

4. EXPLORATORY DATA ANALYSIS(EDA)

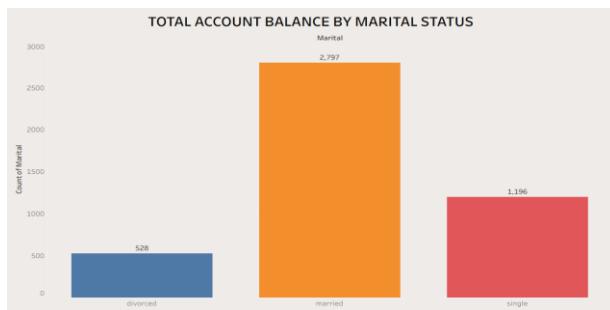
➤ BAR CHART



INTERPRETATION

Overall, the chart indicates that employment status plays a crucial role in customer distribution. Organizations can leverage this insight to improve segmentation, targeting, and product positioning based on job categories.

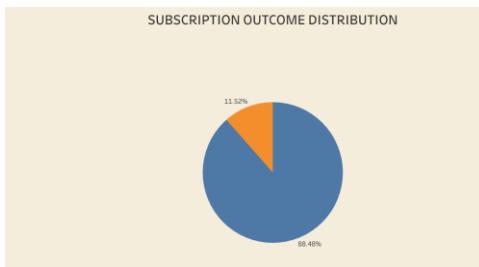
➤ BAR CHART



INTERPRETATION

Overall, the chart indicates that married customers are the primary contributors to total account balances, followed by single customers, while divorced customers contribute the least. Understanding these differences can help organizations tailor financial strategies and customer offerings based on marital status.

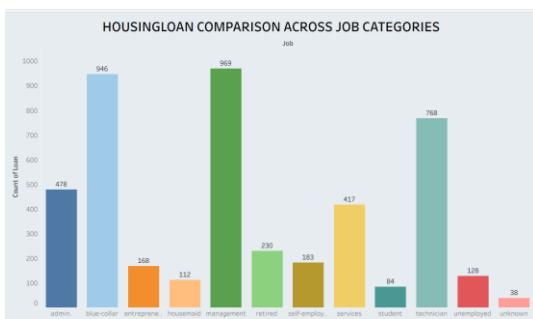
➤ PIE CHART



INTERPRETATION

Overall, the chart shows that a large majority of customers did not subscribe, with a relatively small portion converting successfully. This insight is critical for refining marketing strategies, optimizing resources, and improving future campaign performance.

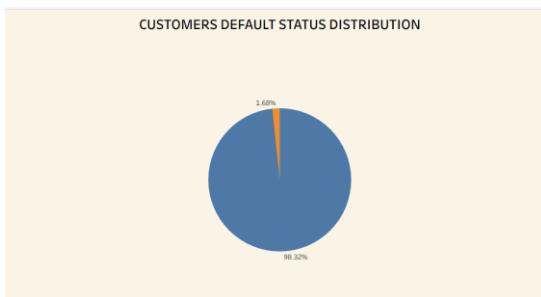
➤ BAR CHART



INTERPRETATION

Overall, the chart highlights a strong correlation between job category and housing loan uptake. Customers in stable employment categories dominate housing loan ownership, while those with less predictable income show significantly lower participation.

➤ PIE CHART



INTERPRETATION

Overall, the chart indicates a **highly stable and reliable customer portfolio**, with the vast majority of customers maintaining good credit standing and only a negligible default rate.

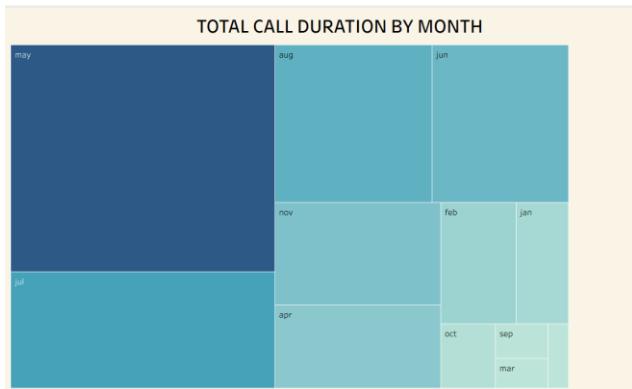
➤ BAR CHART



INTERPRETATION

Overall, the chart indicates that customers contacted via telephone tend to have higher average account balances, followed by cellular contacts, while unknown contact methods are associated with lower balances. This insight can help optimize communication strategies and improve campaign outcomes.

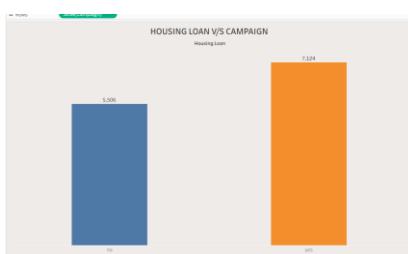
➤ TREEMAP CHART



INTERPRETATION

Overall, the chart highlights clear **seasonal patterns in call duration**, with mid-year months dominating total call activity. Understanding these trends can help improve campaign scheduling, workforce planning, and customer outreach effectiveness.

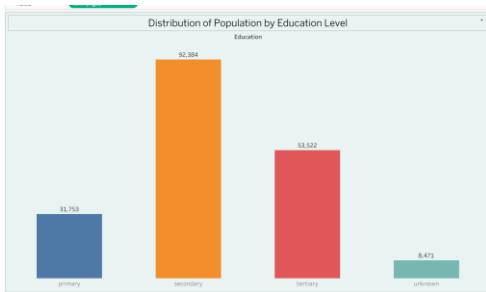
➤ BAR CHART



INTERPRETATION

The chart clearly shows that the campaign achieved **better positive engagement** among housing loan customers. This highlights an opportunity to **focus marketing strategies** on this segment to drive higher conversion and business growth.

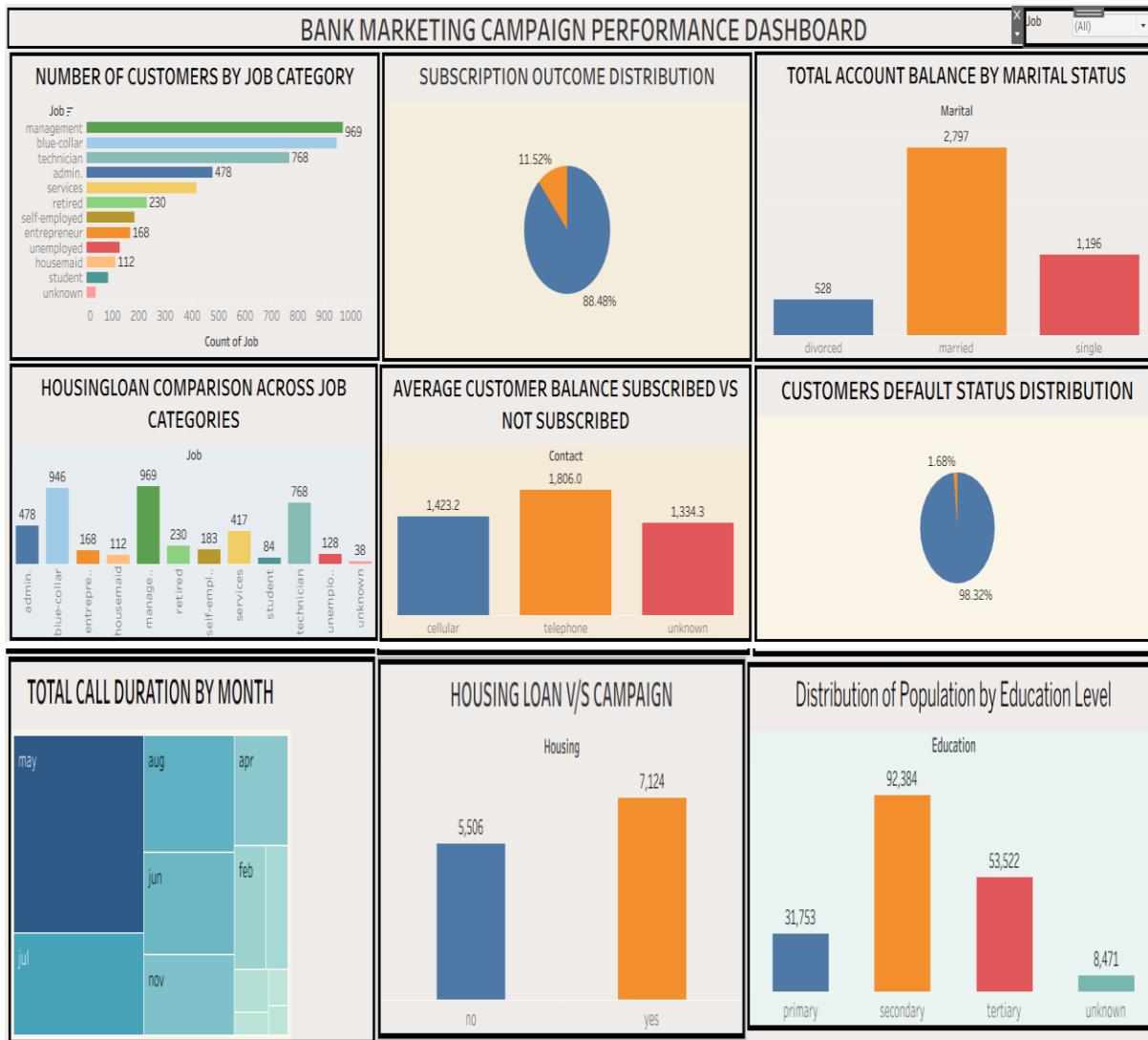
➤ BAR CHART



INTERPRETATION

The chart indicates that the population is predominantly **secondary-educated**, followed by a strong **tertiary-educated segment**. This educational structure supports targeted decision-making in marketing, policy planning, and customer segmentation.

5.DASHBOARD



6.CONCLUSION

The primary aim of this project was to analyze customer demographic and financial data to understand **campaign performance** and identify the key factors influencing whether customers respond positively to marketing campaigns. The project used data visualization and exploratory analysis to uncover patterns related to **education level, housing loans, and campaign outcomes**, supporting data-driven decision-making.

- Key Insights Discovered

1. Campaign Effectiveness

The analysis showed that **positive campaign responses were higher than negative ones**, indicating that the campaign strategy was generally effective.

2. Impact of Housing Loans

Customers associated with **housing loans demonstrated higher engagement** with the campaign, suggesting they are a **high-potential and responsive customer segment**.

3. Education Level Distribution

The majority of customers belonged to the **secondary education group**, followed by **tertiary education**. This reveals a **moderately educated customer base**, which is important for tailoring marketing communication and product design.

4. Value of Customer Segmentation

The project highlighted how demographic and financial attributes significantly influence customer behavior, reinforcing the importance of **segmented and personalized marketing strategies**.

This project successfully demonstrates the power of data analytics in transforming raw customer data into **actionable business insights**. By identifying responsive customer segments and understanding their characteristics, organizations can enhance **campaign effectiveness, customer engagement, and strategic planning**. Ultimately, this analysis supports smarter, evidence-based decisions that drive sustainable business growth.