

Banking Data Dashboard

Introduction

This report analyzes customer data from a banking dashboard to provide insights into customer demographics, campaign performance, and overall banking operation.

Objective:

The goal is to optimize marketing strategies and improve customer engagement.

Data Sources

The data sources used for the analysis include:

1. **Customer Data:** Information on customer balances, credit status, age, job type, marital status, and education level.
2. **Campaign Data:** Records of marketing campaign interactions and responses.

Data Cleaning

Data cleaning ensures the dataset is accurate and ready for analysis:

Removing Duplicates: Ensuring each record is unique.

Handling Missing Values: Filling in or removing missing data points.

Standardizing Formats: Ensuring consistency in data formats (e.g., dates, categorical variables).

Correcting Errors: Fixing any inaccuracies or inconsistencies.

Metrics and KPIs

Key metrics and KPIs analyzed include:

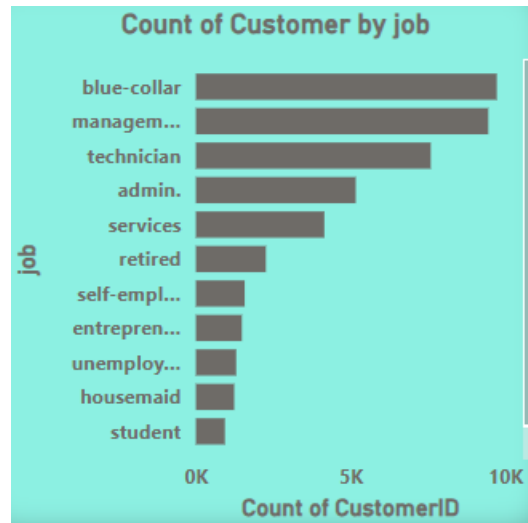
1. **Average Balance:** 1.36K
2. **Number of Customers with Credit:** 815
3. **Success Rate of Campaigns:** 3.34%
4. **Average Age of Customers:** 40.96 years
5. **Conversion Rate:** 11.70%

Dashboard Layout

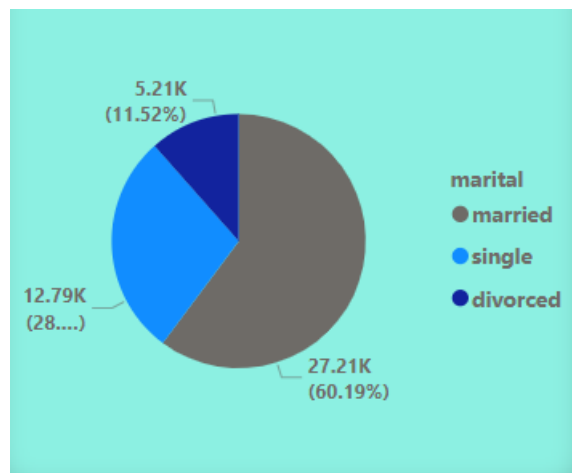
The dashboard provides visual insights into the data, structured as follows:

1. **Customer Demographics:**

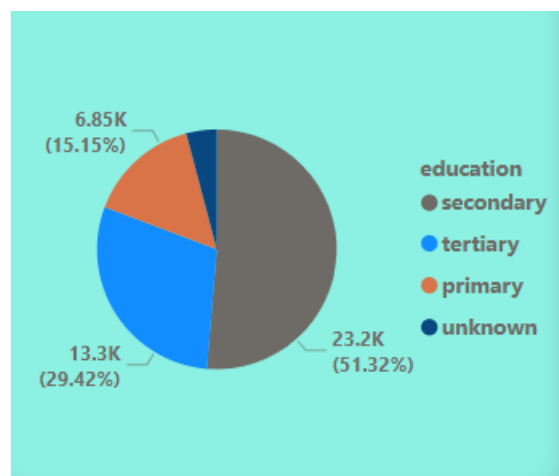
- **Job:** Bar chart showing the number of customers by job type.



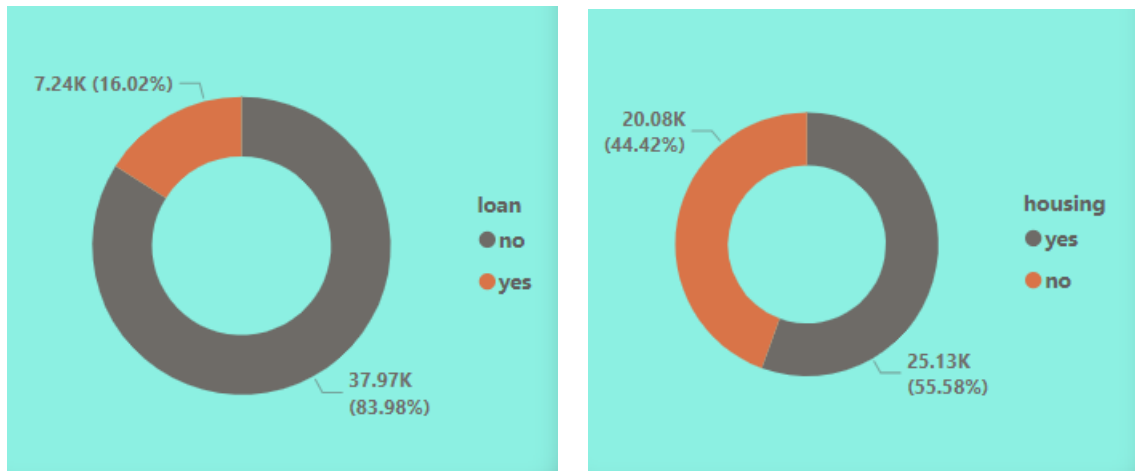
- **Marital Status:** Pie chart showing the number of customers by marital status.



- **Education:** Pie chart showing the number of customers by education level.

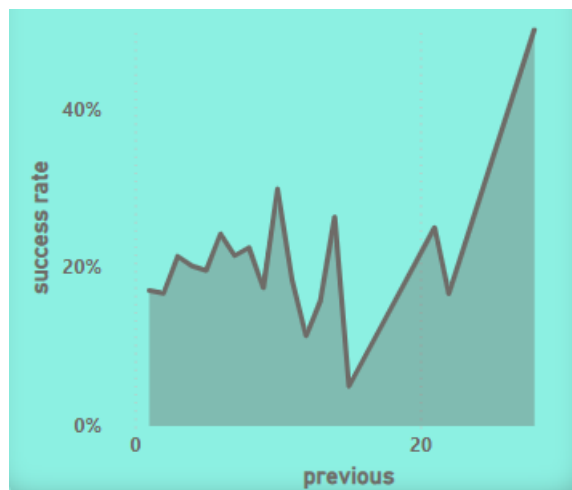


- **Housing and Loan Status:** Pie chart showing the count of customers by housing and loan status.

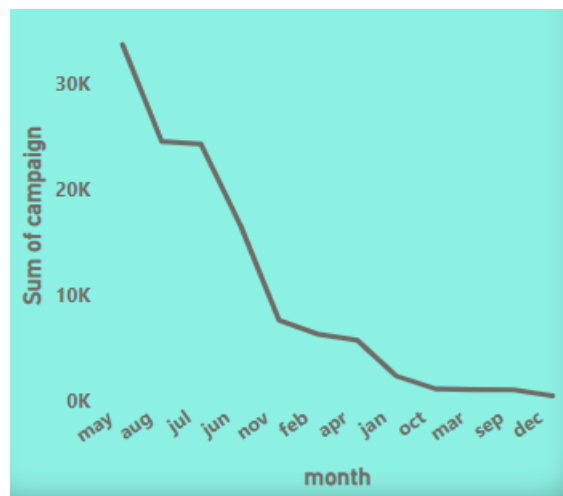


2. Campaign Performance:

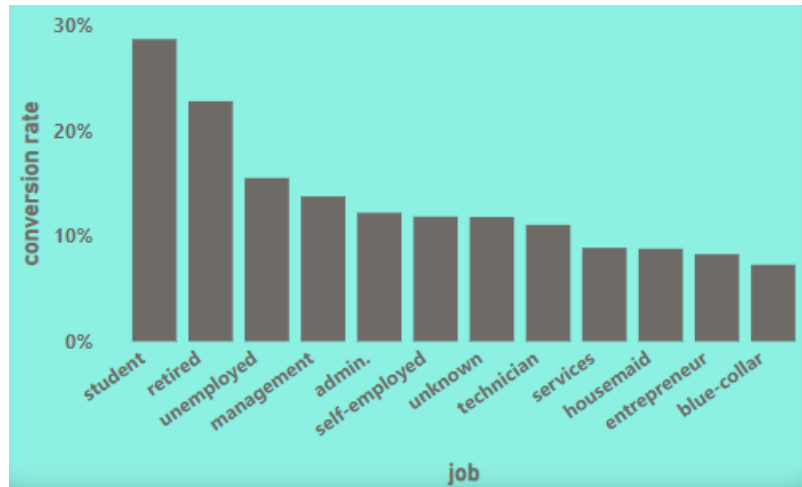
- **Success Rate by Previous Campaigns:** Line chart showing success rates based on the number of previous contacts.



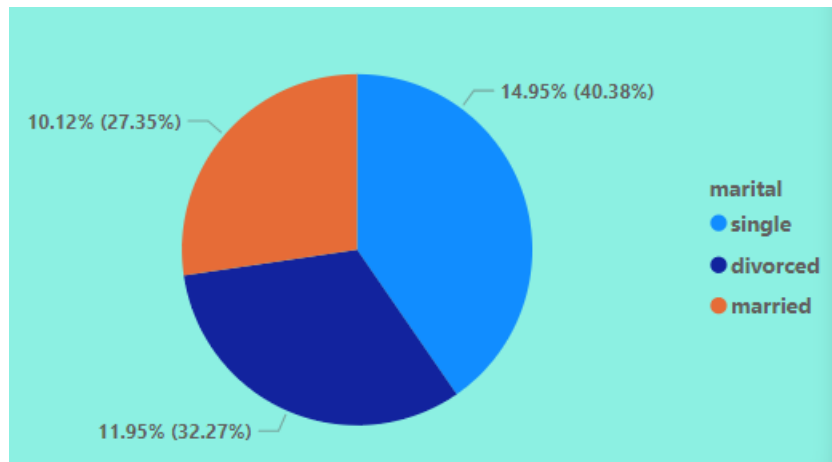
- **Total Campaigns by Month:** Line chart showing the number of campaigns conducted each month.



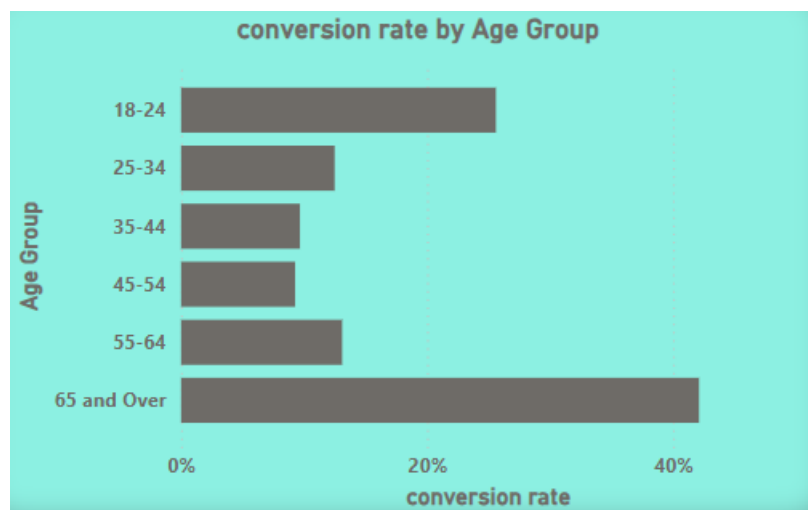
- **Conversion Rate by Job:** Bar chart showing conversion rates for different job categories.



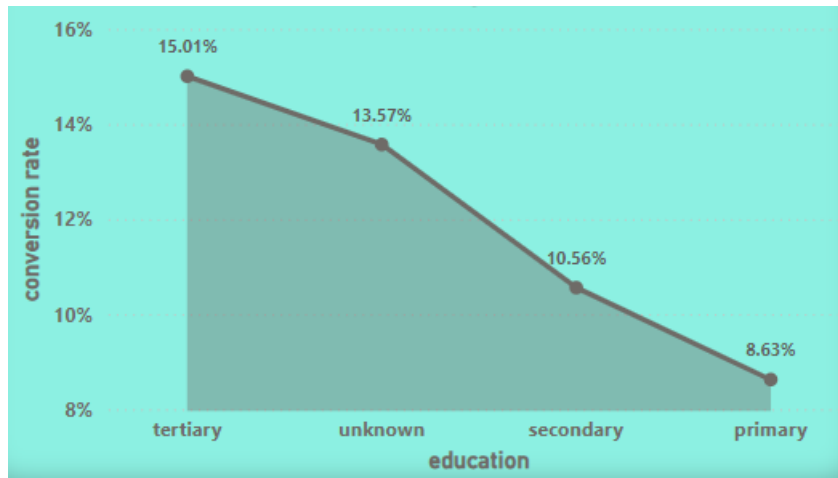
- **Conversion Rate by Marital Status:** Pie chart showing conversion rates by marital status.



- **Conversion Rate by Age Group:** Bar chart showing conversion rates for different age groups.

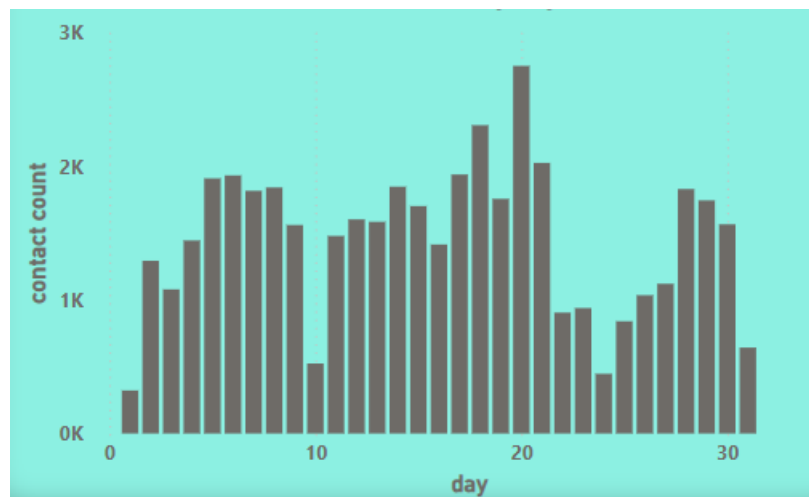


- **Conversion Rate by Education:** Line chart showing conversion rates by education level.



3. Contact Analysis:

- **Contact Count by Day:** Bar chart showing the number of contacts made each day.



Analysis and Insights

1. Customer Demographics:

- **Job Distribution:** The majority of customers are employed in “blue collar” jobs, with management and technician roles also significant.
- **Marital Status:** Most customers are married (40.38%), followed by single (27.35%) and divorced (32.27%).
- **Educational Level:** A significant portion of customers have secondary education, highlighting the need for targeted financial for this group
- **Housing and Loan Status:** More customers do not have housing loans (55.58%) compared to those who do (44.42%).

2. Campaign Performance:

- **Conversion Rate:** The overall conversion rate is 11.70%, with students and retired individuals showing the highest rates. Younger age groups (18 – 24) also have high conversion rates, indicating effective targeting of these segments.
- **Monthly Trend:** Campaign activity peaks mid-month, suggesting these periods are more effective for customer outreach.

3. Contact Analysis:

Day-wise Distribution: Contact counts are evenly extended, with slight peaks observed in the middle of the month, reflecting efficient campaign scheduling.

Conclusion

The dashboard provides valuable insights into customer demographics and campaign performance. By using these insights, the bank can make its marketing strategies target specific customer segments more effectively, thus improving conversion rates and overall customer satisfaction.