



Unlocking Deposit Acceptance: Exploring Key Factors and Recommendations

<https://github.com/MuhammedRagabb/Deposit-acceptance-analysis.git>

The background image shows several hands of different skin tones reaching towards a wooden table. On the table, there are several interlocking gears. One gear in the center is a light tan color, while the others are a dark grey. The hands appear to be in the process of assembling or adjusting the gears, symbolizing teamwork and the interconnectedness of different factors in a system.

Introduction:

The analysis focuses on understanding the factors that influence deposit acceptance in the context of a bank's target marketing campaign.

By examining the relationship between specific demographic and financial variables and the likelihood of making a deposit, we aim to gain insights that can inform effective marketing strategies and improve campaign outcomes.

A group of colorful stick figures in various poses, some standing and some falling, on a dark surface. The figures are in shades of black, white, green, yellow, and red. They are arranged in a loose cluster, with some figures appearing to be in motion or falling. The background is a dark, textured surface.

Objectives:

1. Explore the relationship between marital status and deposit acceptance.
2. Investigate whether education level is associated with the likelihood of making a deposit.
3. Assess the impact of housing loan status on deposit acceptance.
4. Determine if having a personal loan affects the probability of making a deposit.

EDA:

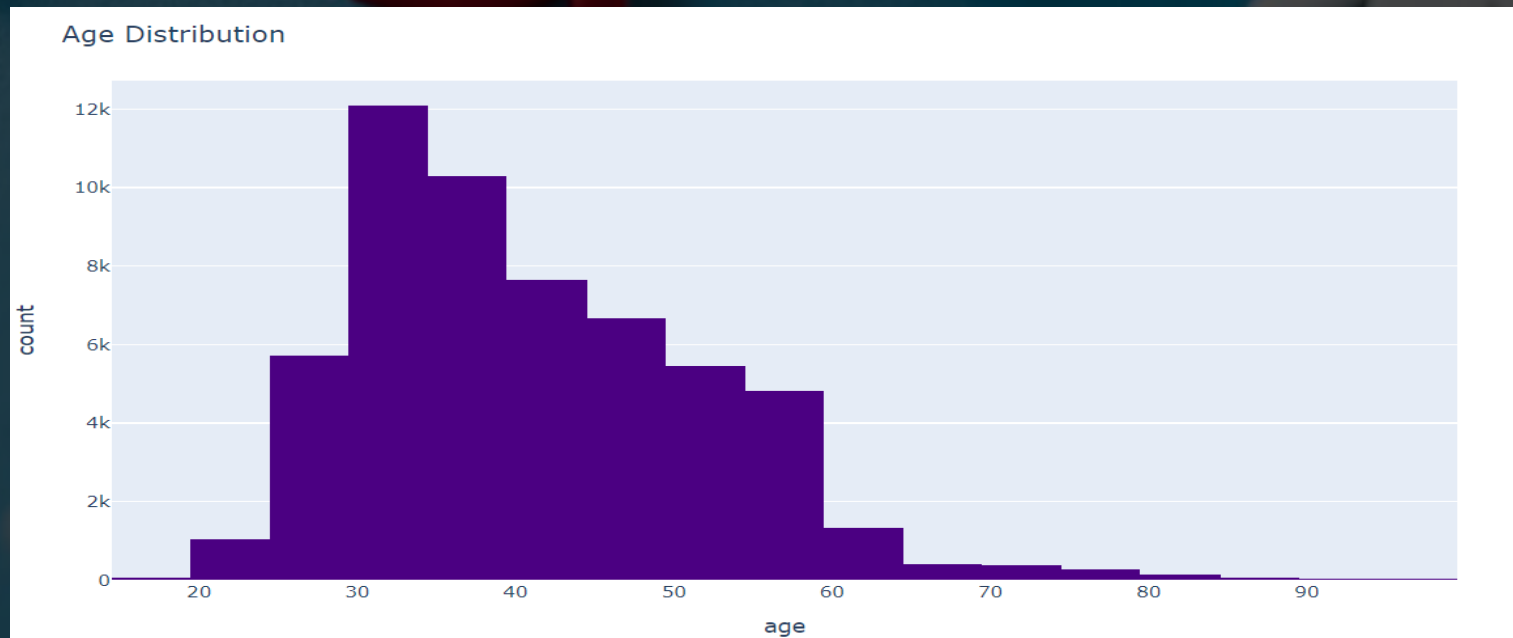
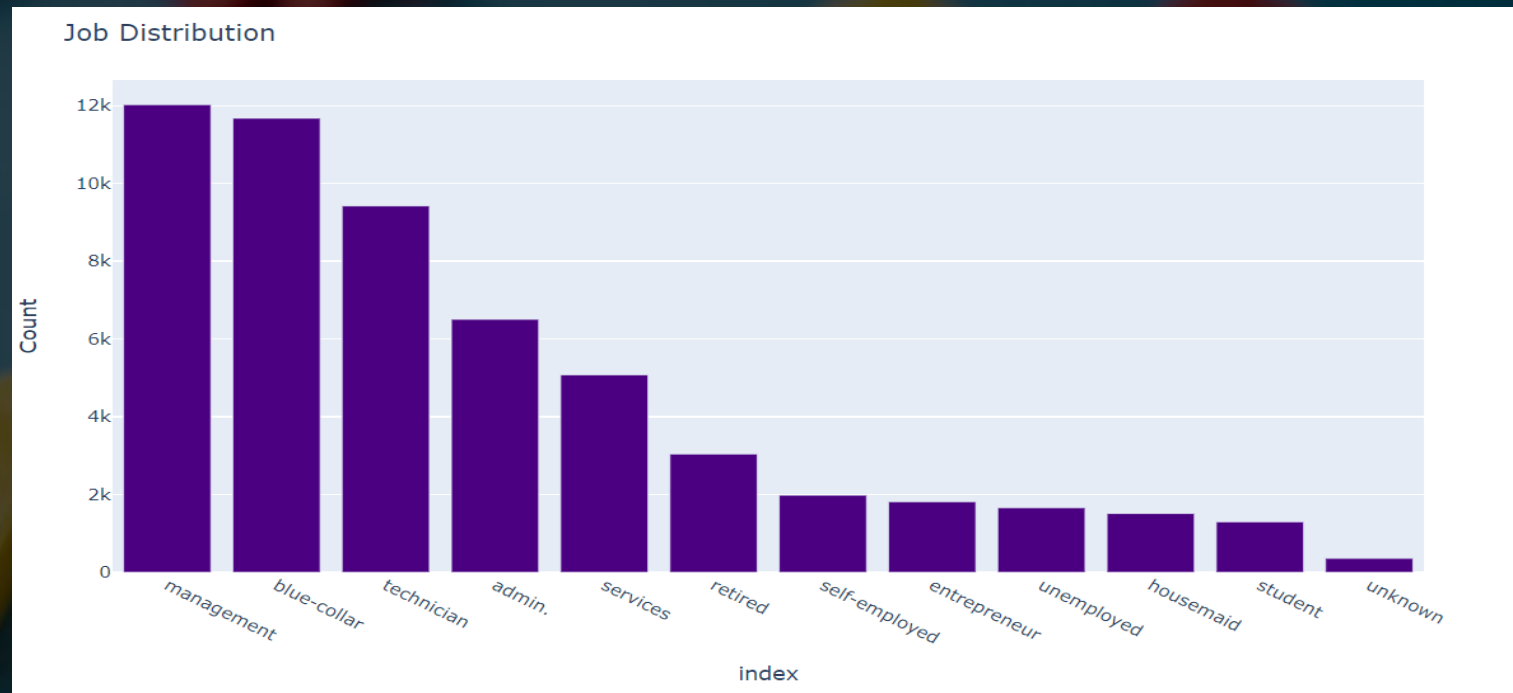
- **Job Distribution:**

- The Top Three Jobs are:

1. Management
2. Blue-collar
3. Technician

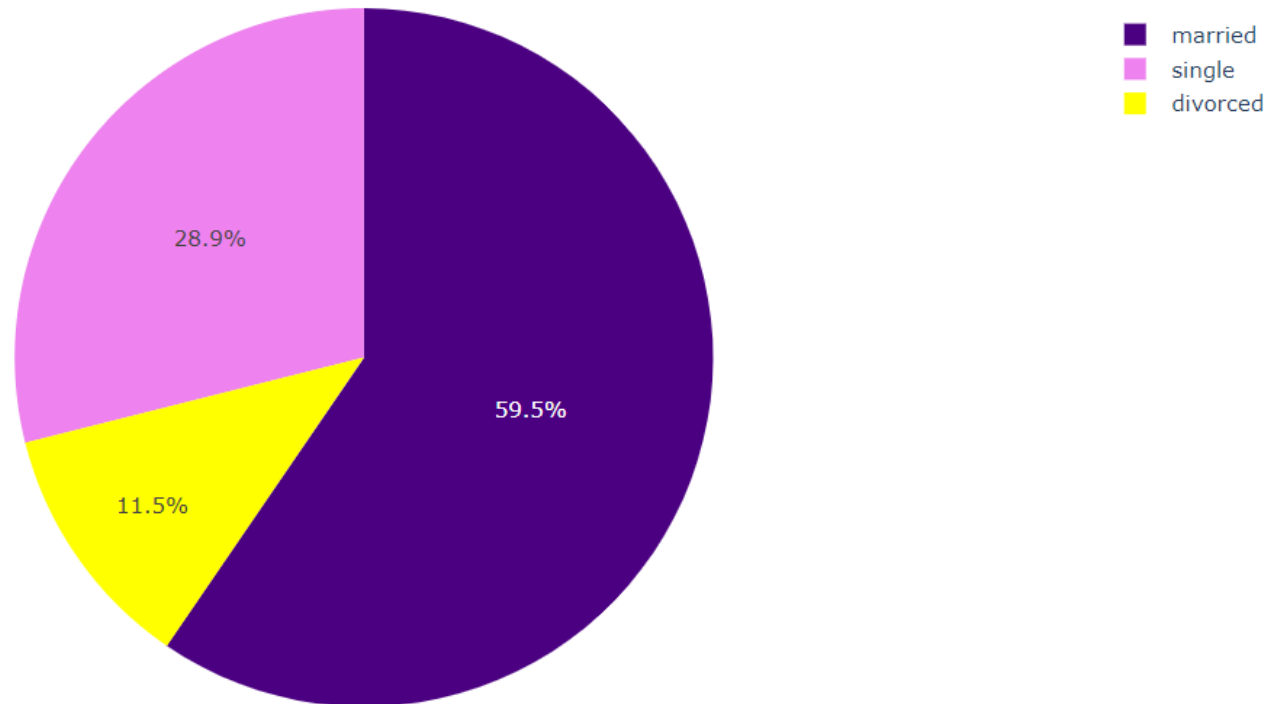
- **Age Distribution**

- The most common ages varies between 30 and 40

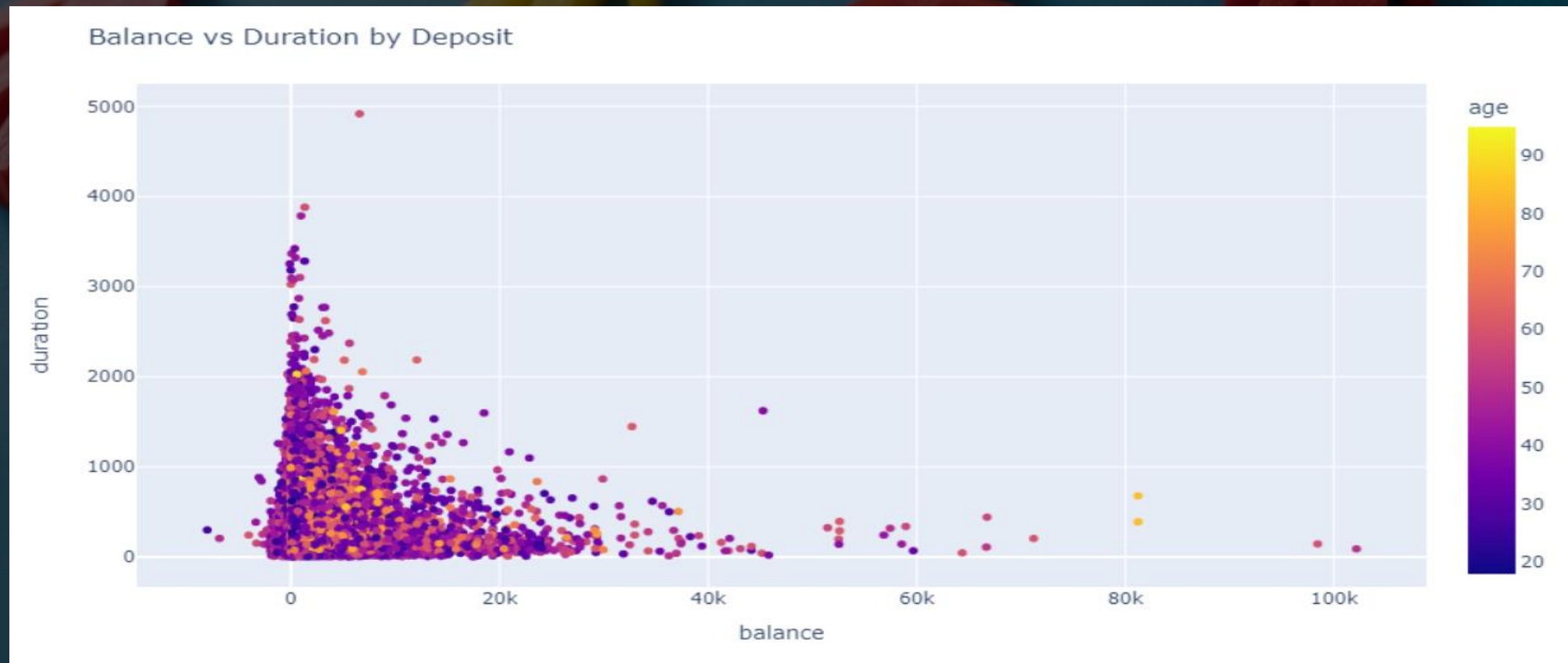


Marital status distribution

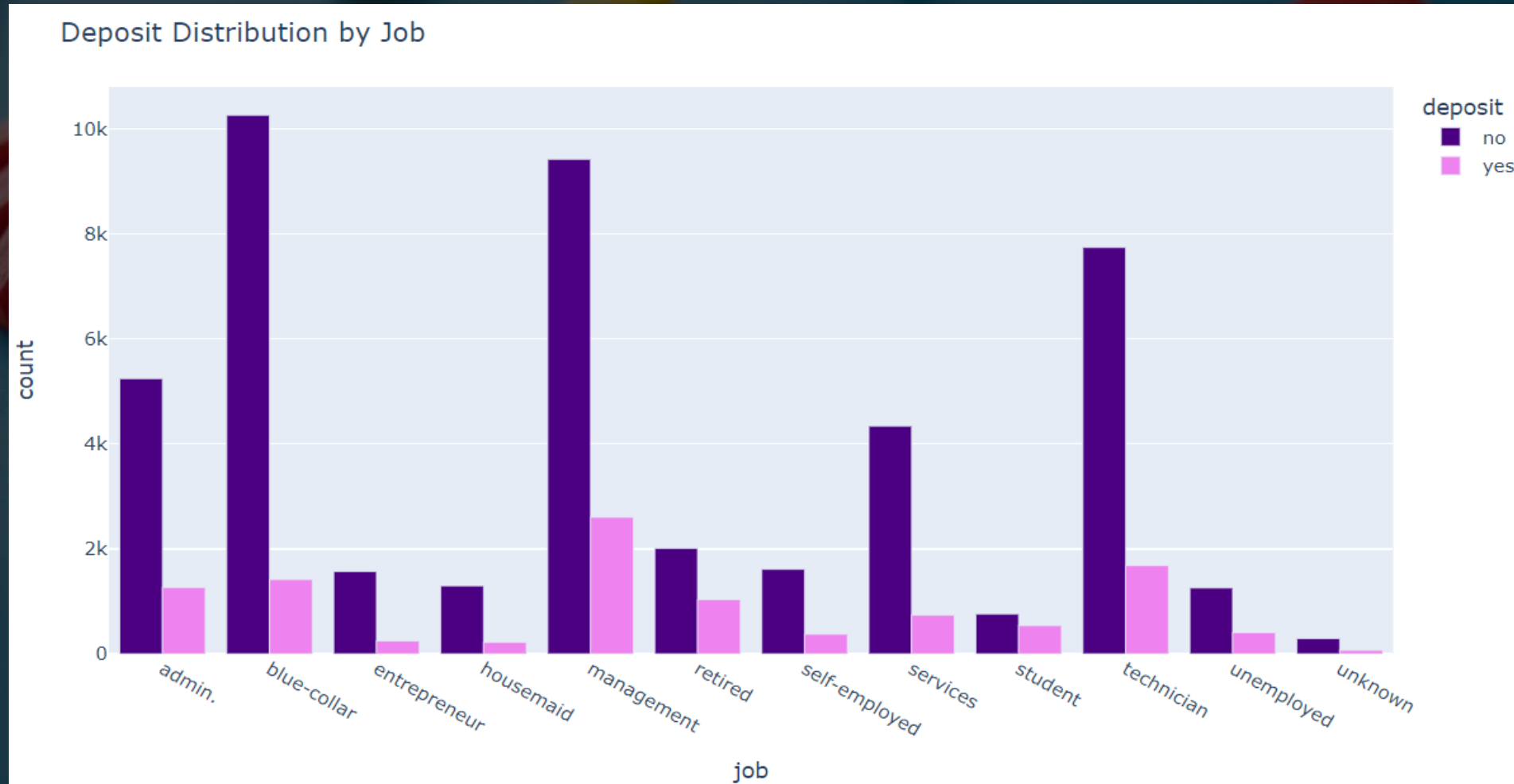
Marital Status



- We created a scatter plot to visualize the relationship between "balance" and "duration," with each point colored based on the deposit category.
- These visualizations (including the previous two with Job and Age distribution) provide insights into how the deposit feature relates to different variables, such as job, age, balance, and duration. You can customize the plots further based on your specific requirements, such as adding labels and titles.

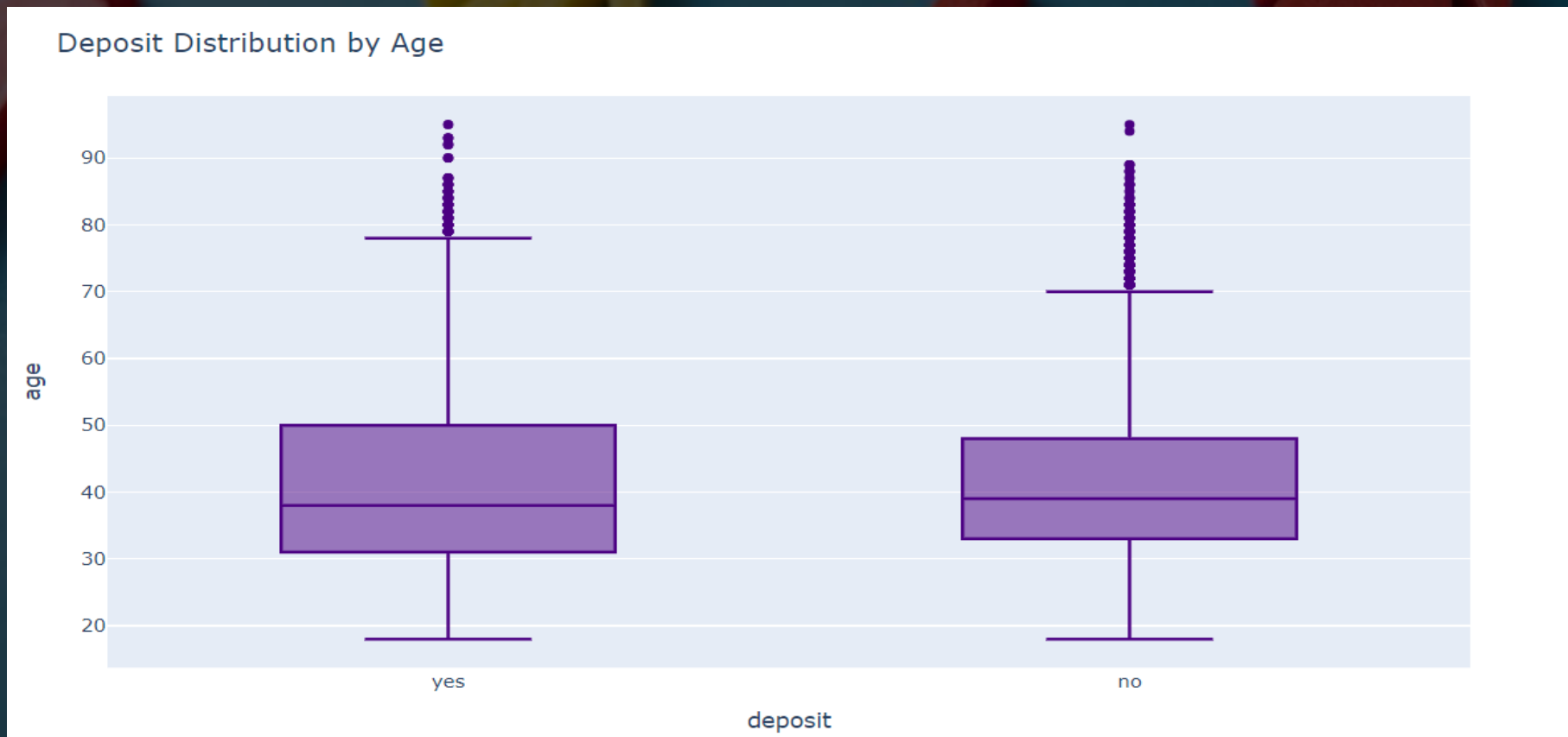


This is how the distribution of deposit differ across different job categories



The relationship between age and deposit acceptance:

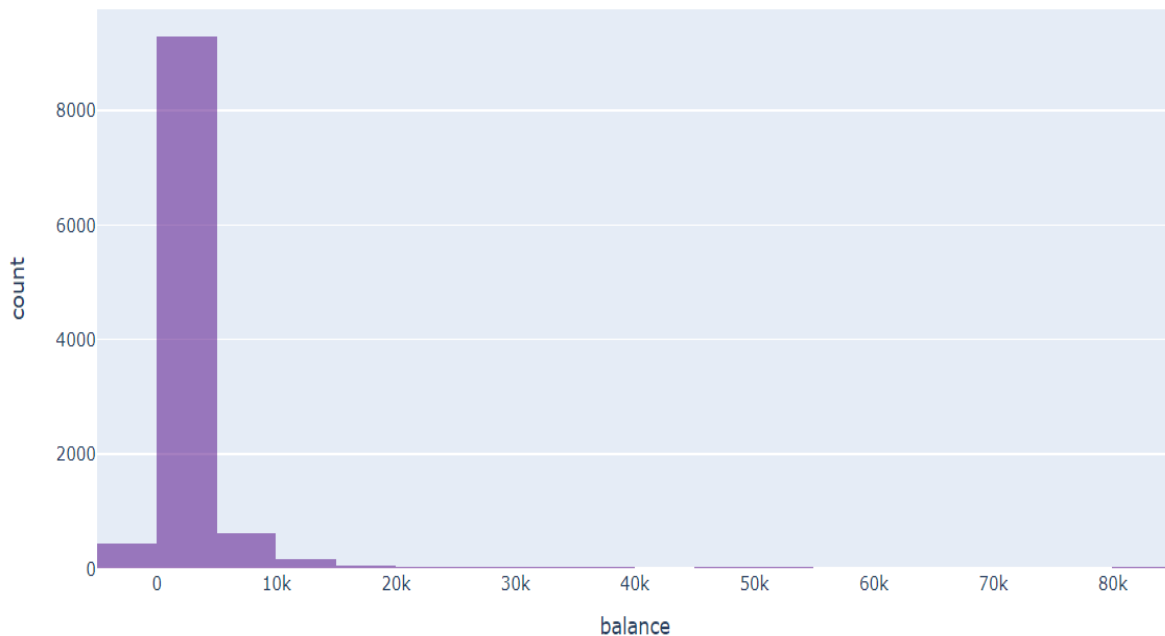
- By examining the box plot, we can observe differences in the median, quartiles, and outliers between the two groups, which would indicate a potential relationship between age and deposit acceptance.



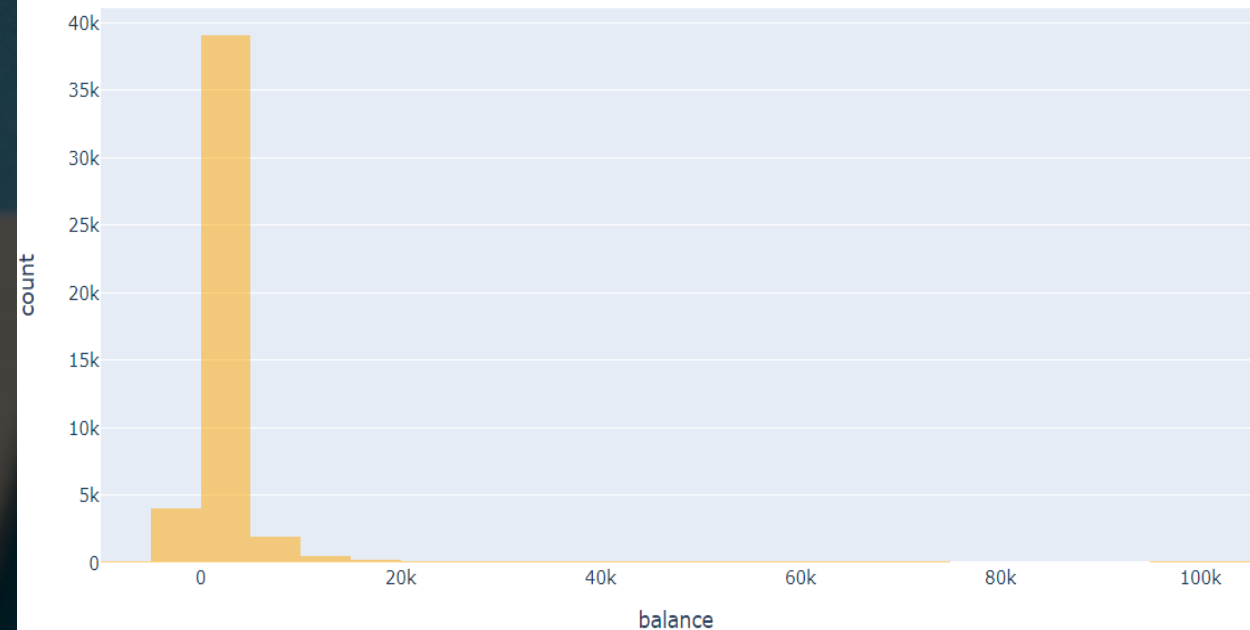
Balance distribution for customers who have and haven't made a deposit

- By examining these histogram plots, you can compare the balance distribution for customers who have and haven't made a deposit.

Balance Distribution (Deposit: Yes)



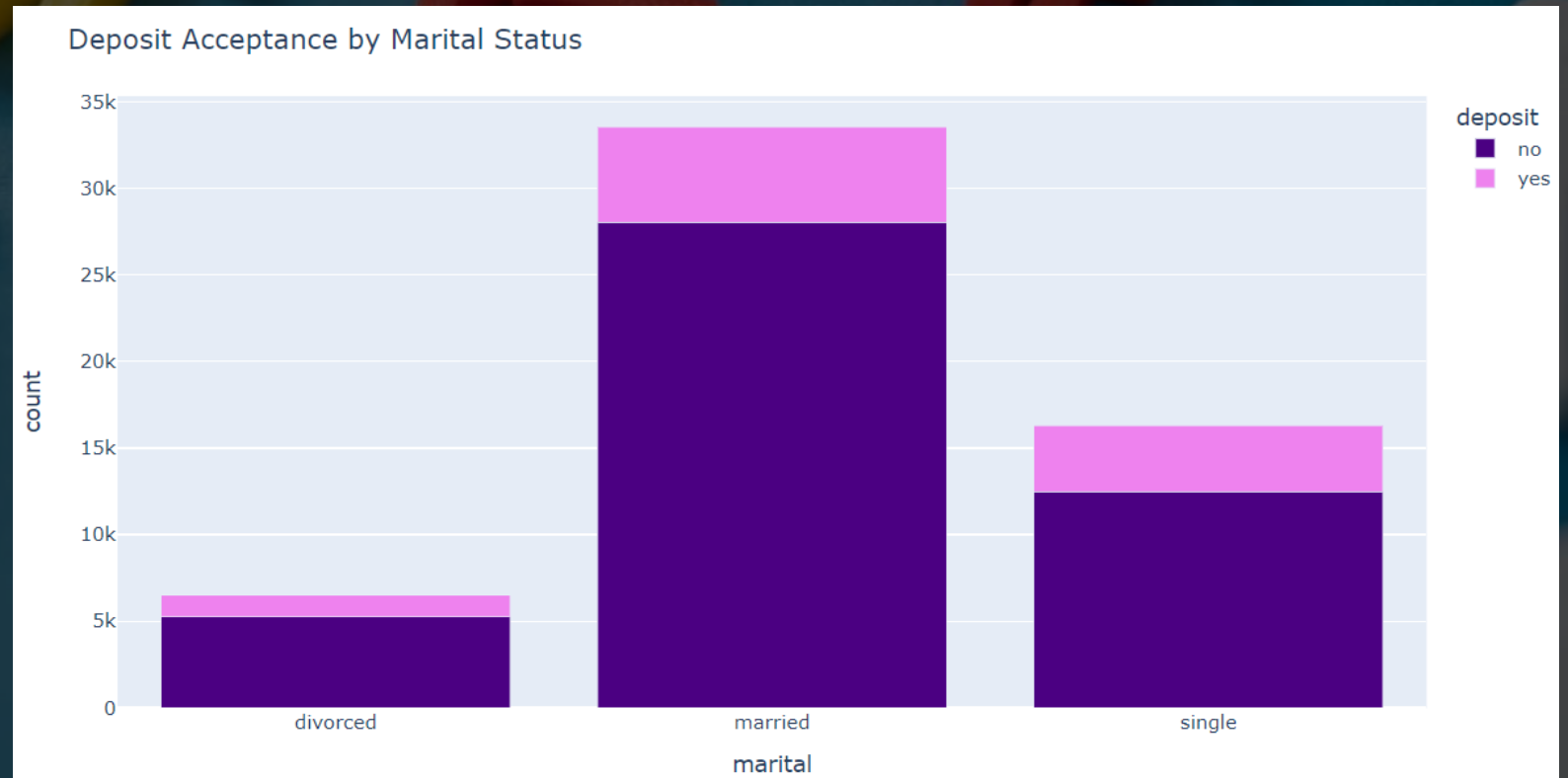
Balance Distribution (Deposit: No)



How does marital status relate to deposit acceptance

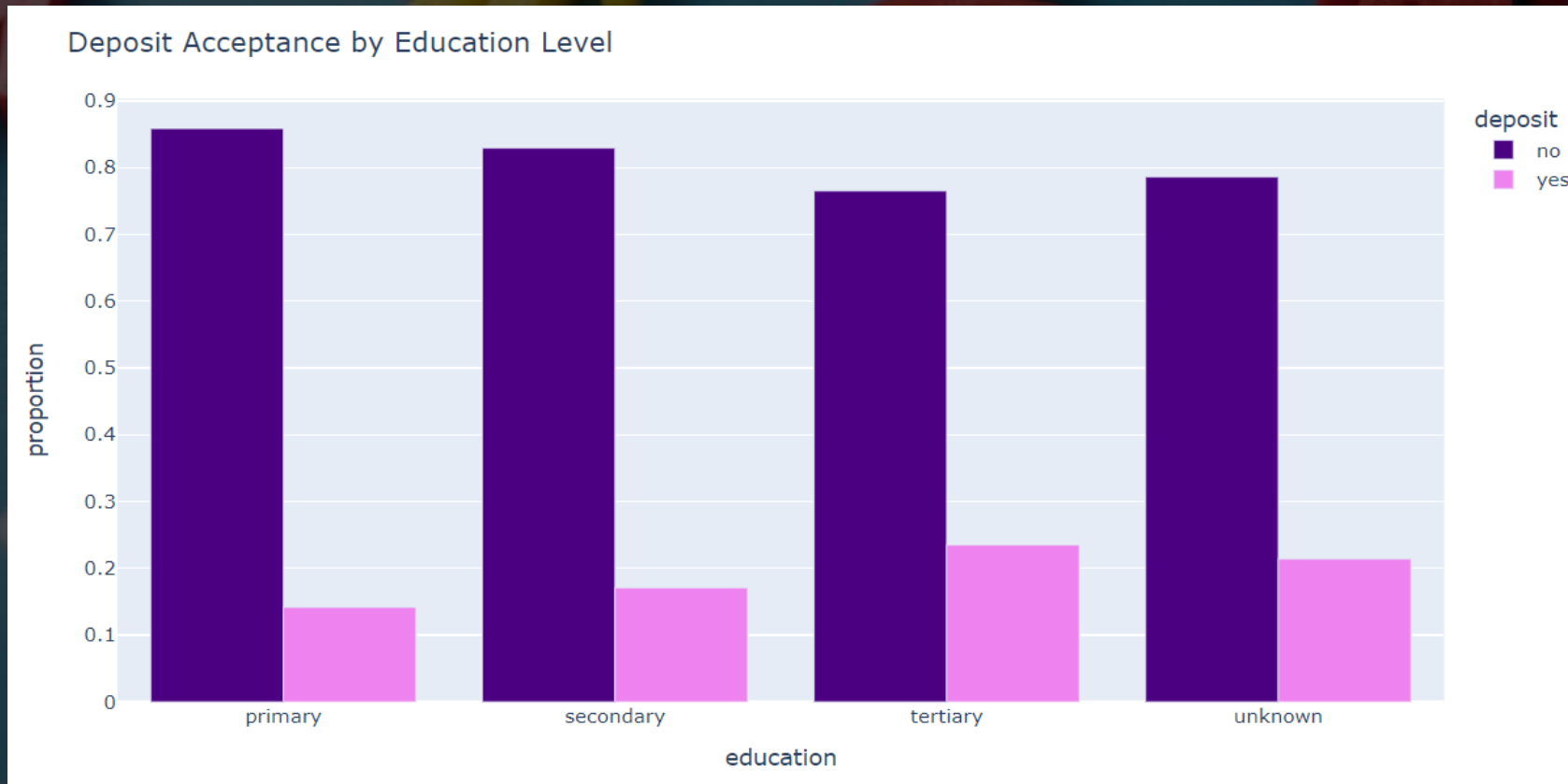
This stacked bar chart visualizes the distribution of deposit acceptance for each marital status category.

It allows you to compare the proportions of deposit acceptance across different marital statuses and identify any potential relationships between marital status and deposit acceptance.



Educational level associated with the likelihood of making a deposit

We can compare the likelihood of making a deposit across different education levels and determine if there is an association between education level and deposit acceptance.



The impact of housing loan status on deposit acceptance

This is represent the proportion of deposit acceptance for customers with and without a housing loan. It allows us to compare the impact of housing loan status on deposit acceptance and determine if there is a relationship between the two variables.

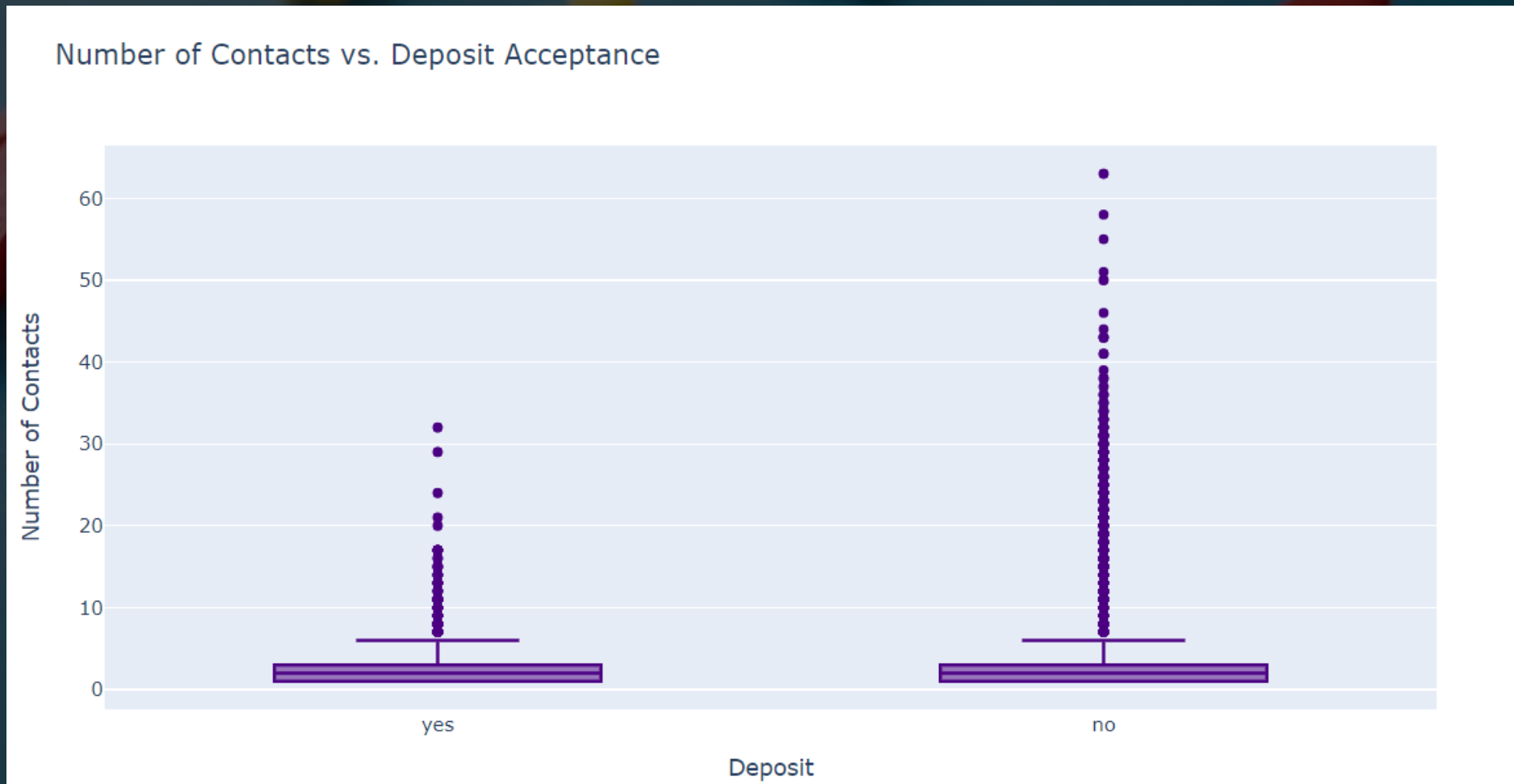


Having a personal loan effect on the probability of making a deposit

These rates represent the probability of making a deposit for each group. By comparing these rates, we can determine if having a personal loan has an impact on the likelihood of making a deposit.



The Relationship between the number of contacts and deposit acceptance



Recommendations:

1. Marital Status vs. Deposit Acceptance:

1. Highlight the importance of marital status as a contributing factor in deposit acceptance.
2. Tailor marketing strategies accordingly by understanding the preferences and needs of different marital status groups.
3. Consider offering targeted financial products or incentives to specific marital status segments to increase deposit acceptance rates.

2. Education Level vs. Deposit Acceptance:

1. Recognize the influence of education level on deposit acceptance and customer behavior.
2. Create educational materials and resources to address the financial needs and concerns of different education levels.
3. Develop personalized marketing campaigns that resonate with individuals based on their educational background.

3. Housing Loan vs. Deposit Acceptance:

1. Highlight the impact of housing loan status on deposit acceptance rates.
2. Explore the potential of offering tailored savings plans or investment options to customers with housing loans.
3. Consider providing financial counseling or assistance to customers with housing loans to build trust and encourage deposit acceptance.

4. Personal Loan vs. Deposit Acceptance:

1. Emphasize the relationship between personal loans and deposit acceptance.
2. Offer targeted promotions or incentives to customers with personal loans to encourage deposit behavior.
3. Provide comprehensive financial advice and solutions that consider the specific circumstances of individuals with personal loans.