PORTUGESE BANK MARKETING REPORT

INTRODUCTION:

The data is related with direct marketing campaigns of a Portuguese banking institution. The marketing campaigns were based on phone calls. Bank asked to analyse and predict the probability of success of campaign (e.g.; if the product would be subscribed or not) based on customers data and previous outcomes.

DATA SUMMARY:

Data contains information of users like:

Job, Age, Marital status, Education, Default Credit, balance, House Loan,

Personal Loan, contacted Via?, which date contacted, which month contacted etc.

DATA CLEANING AND FORMATTING FOR FURTHER ANALYSIS:

Bank_Data.CSV Data here is unformatted, performed text to column to make it in right format.

Created dummy variable for Categorical data: Month, Job, Education, Marital Etc.
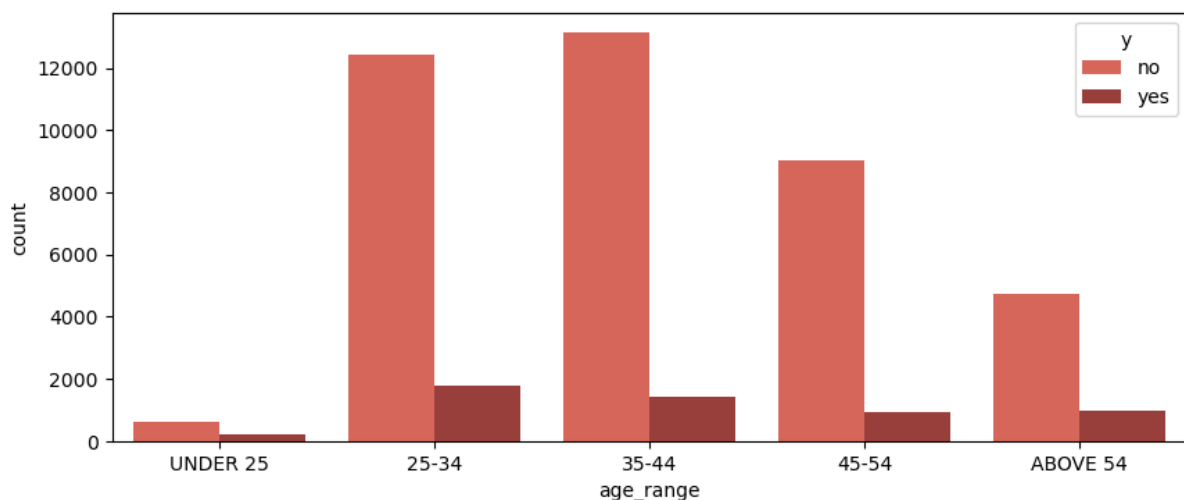
Finally Concatenated the Dummies With Original Bank data and removed Categorical variable.
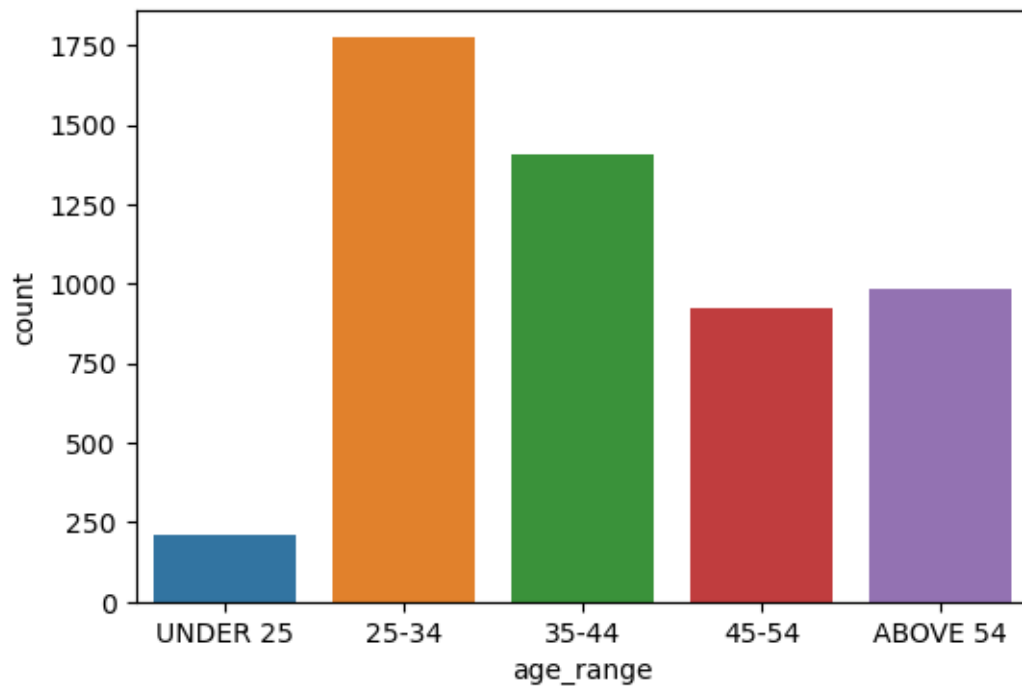
Same Done For Test CSV File data.

ANALYZING THE DATA:

Performed data analysis with data containing original data (I.e.; containing categorical data)
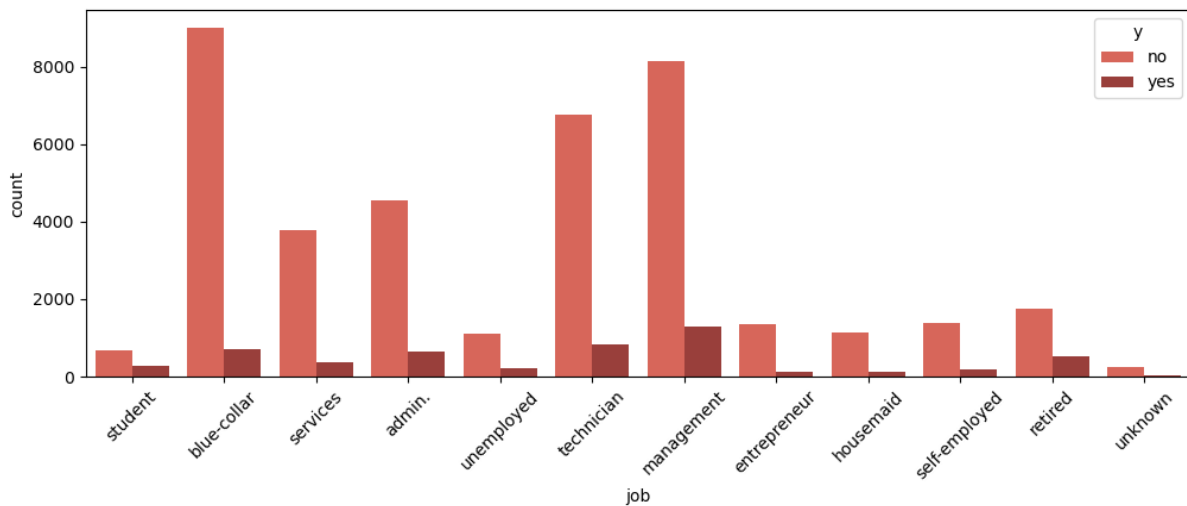
AGE WISE

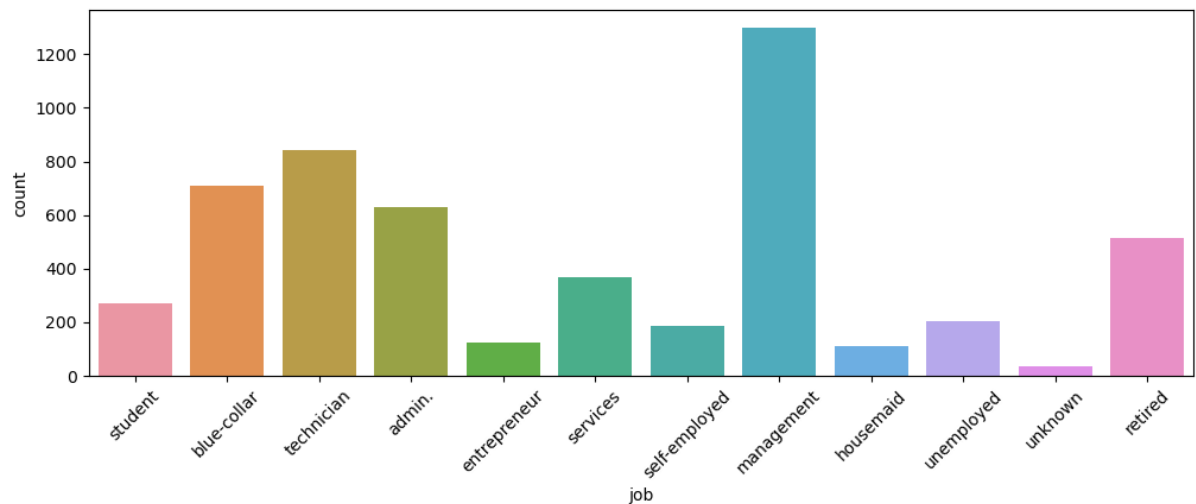Above Chart Shows customers of different age groups subscribed to product or not.

This is chart from people who subscribed to product. Above or 25 Aged customers more interested in subscribing to product.
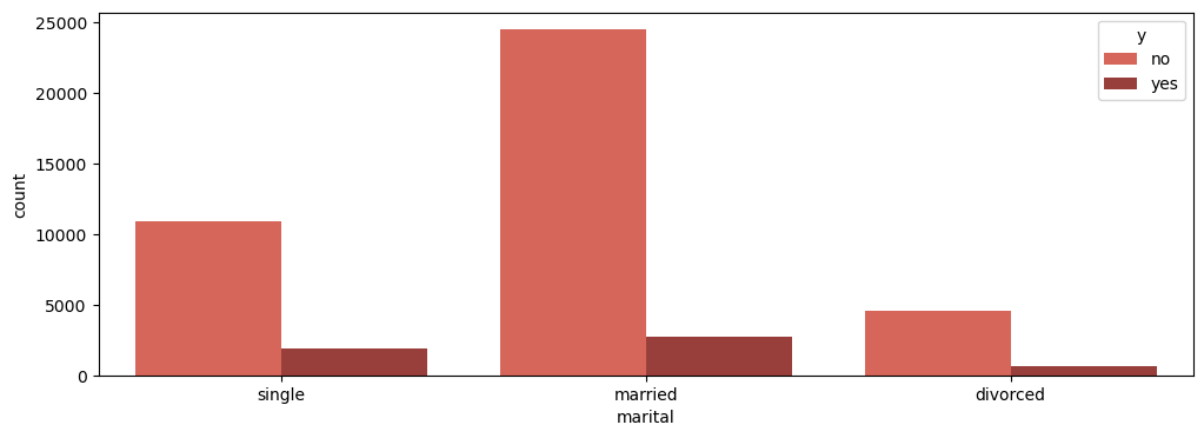
JOB WISE:

Above Chart Shows how many customers of different job departments groups subscribed to product or not.
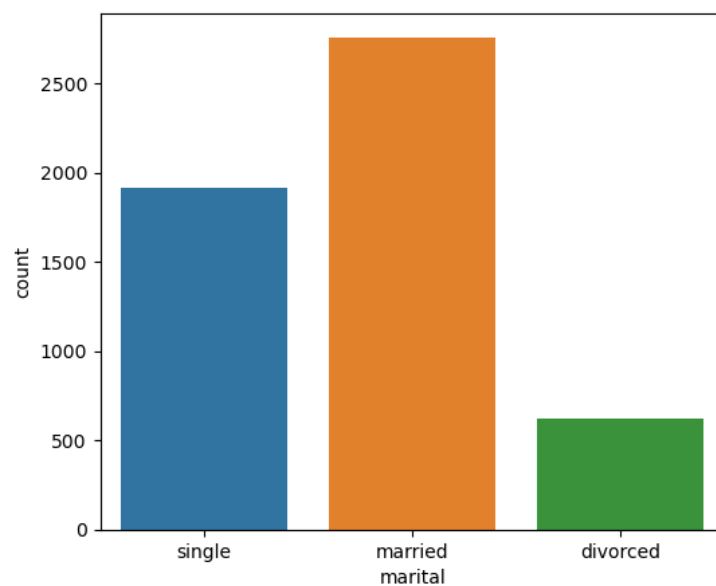
This is chart from people who subscribed to product. Customers in job department [management, admin, technician, blue-collar] more interested in subscribing to product.
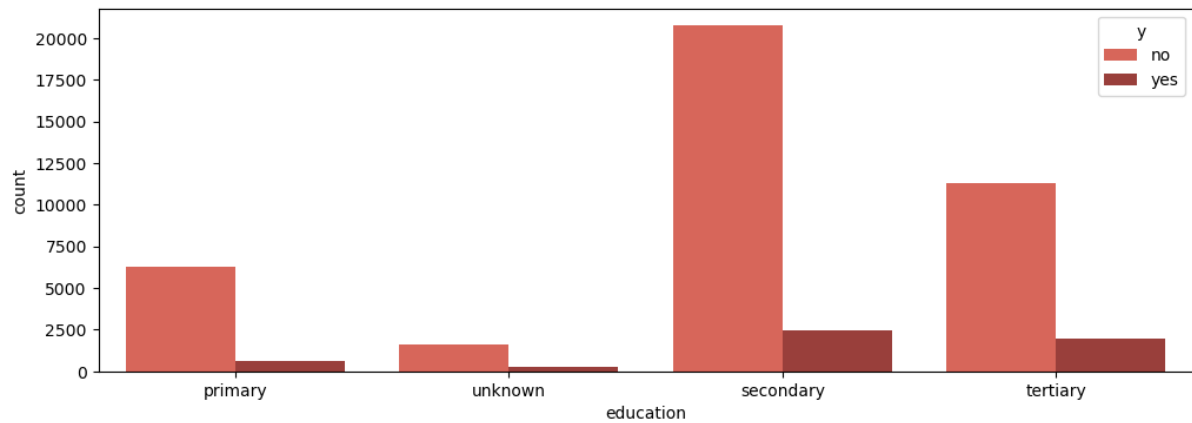
MARITAL STATUS WISE:

Married and Single Customers are more interested in subscribing the product.
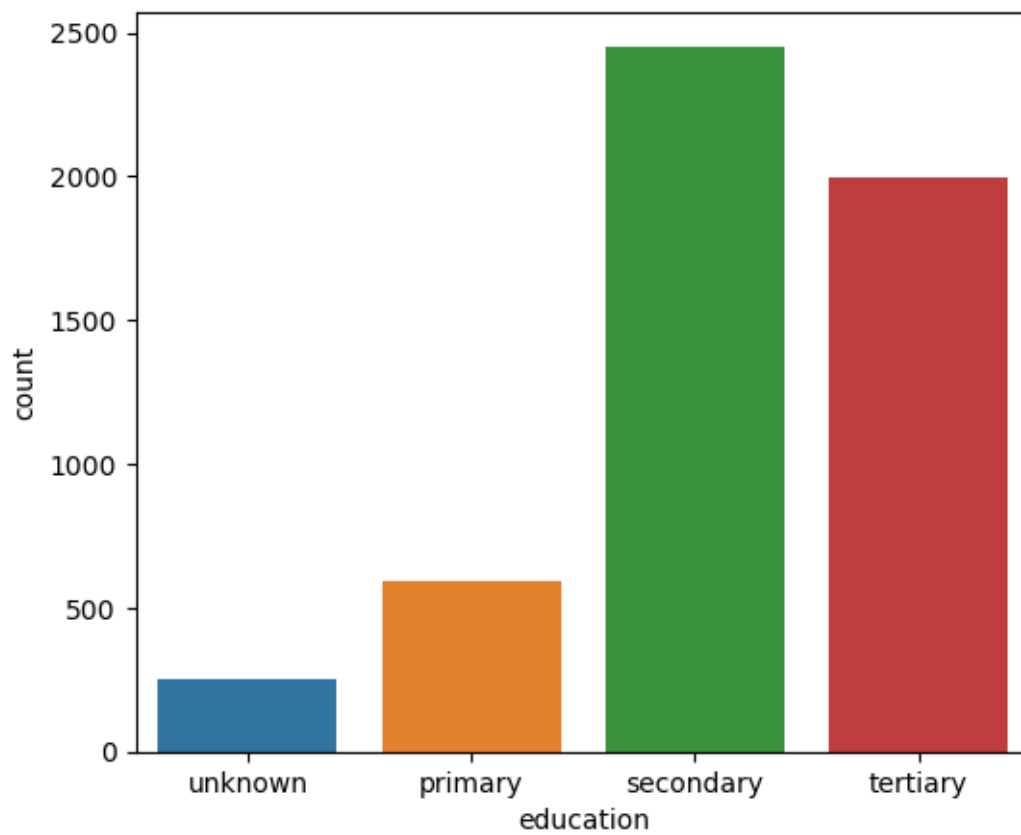
Above is Chart of marital status wise customers who subscribed to product in last campaign.
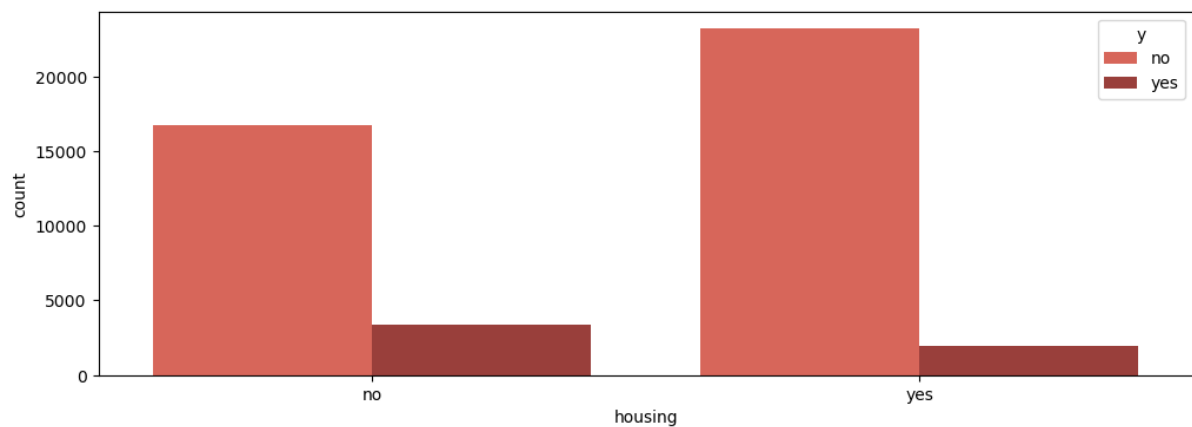
EDUCATION WISE

Above chart shows Education wise customers interest in subscribing to product.

And We can see from above chart which is of customers who subscribed to product in previous campaign. And People with Secondary and Tertiary Education level subscribed more.
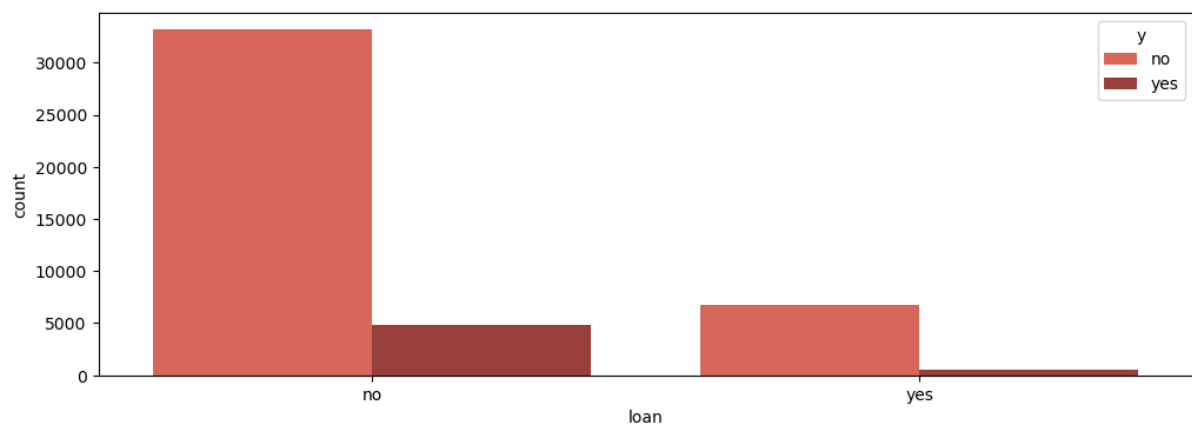
HOUSE LOAN WISE:

Above chart shows who subscribed to product , customer having house loan or customer not having any housing loan.
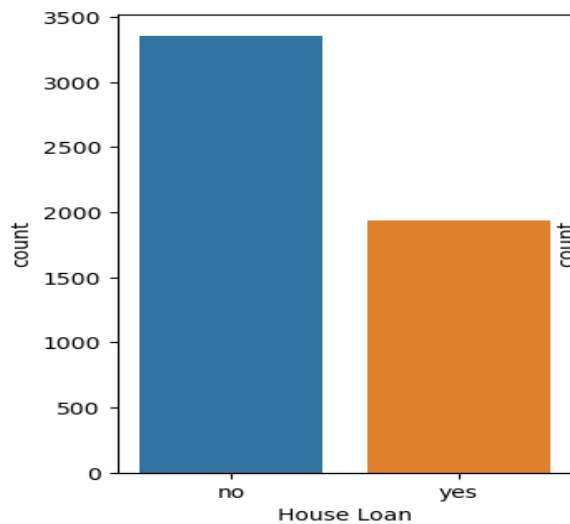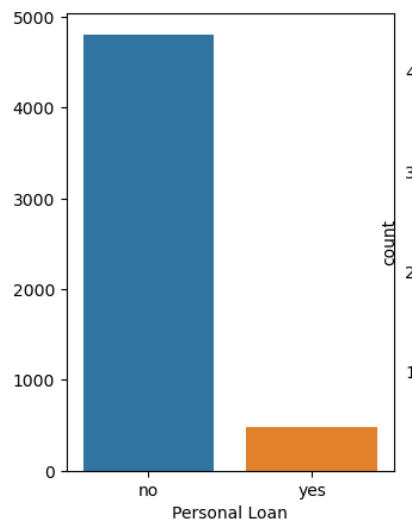

Above Chart shows customers with not any house loan have subscribed more to product. But also at same time People with house loan also much interested in taking of the product.
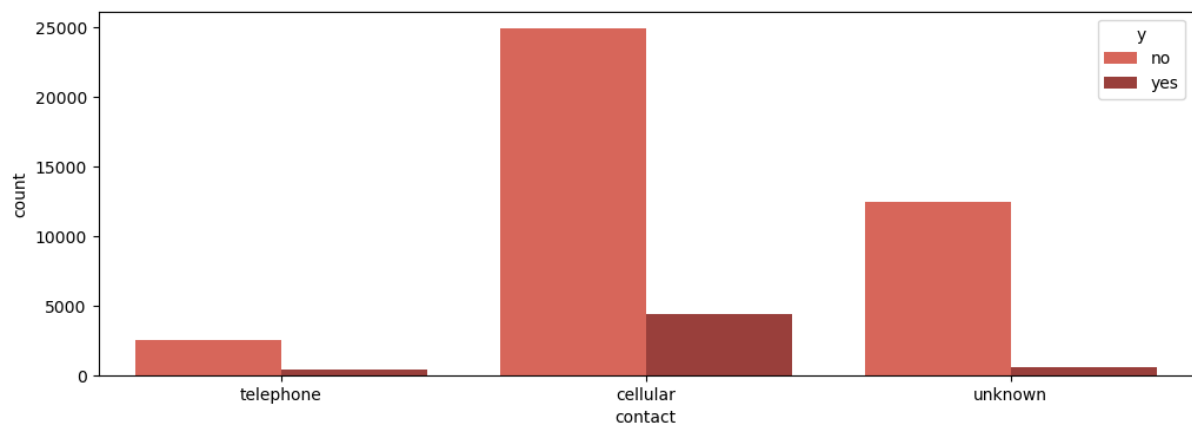
PERSONAL LOAN WISE:

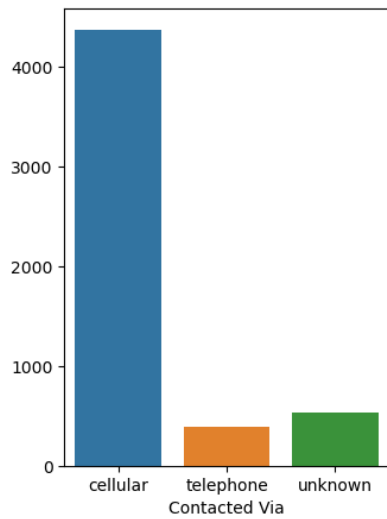Above chart shows who subscribed more to product , Customers with Pesonal Loan or Customers with no personal loan.

Above Chart shows customers with no personal loan are more likely subscribed to product in last campaign than customers having personal loan.
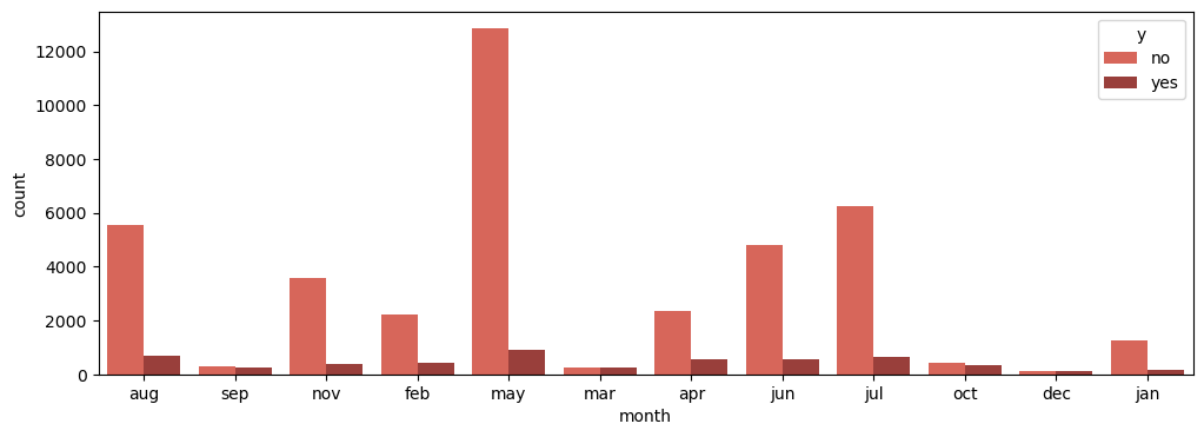
CONATACTED DIVISE WISE:

Above Chart shows when customers more like to subscribe based on the stream they conatcted in previous campeign.
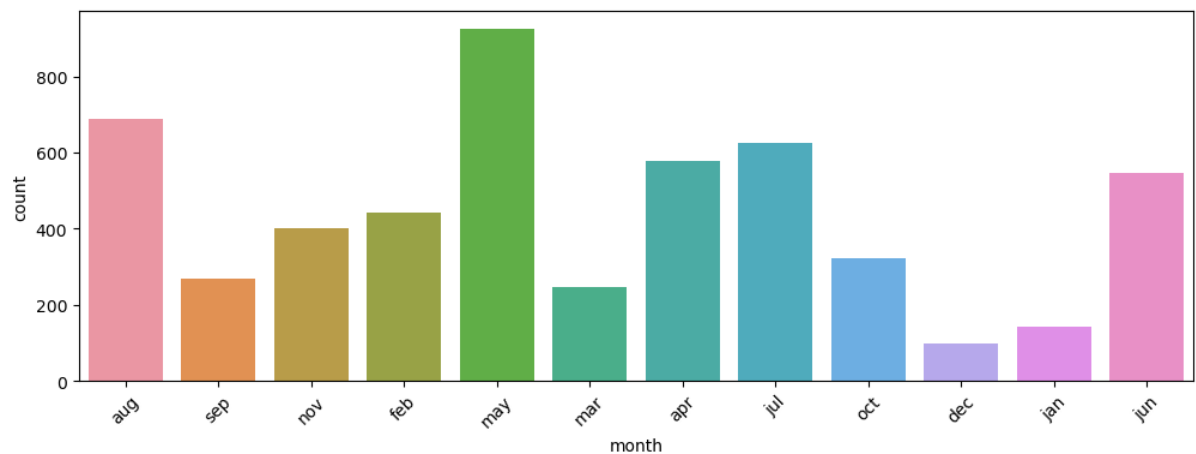
This Chart Shows in previous Campaign people contacted vis cellular more subscribed to product.

MONTH WISE:

Above Chart shows month wise people contacted and subscribed to product.

And This chart shows less cusomers subscribed when they contacted in months : Sep, Mar, Oct, Dec and Jan.

RESULT and CONCUSION:

After going through above chats and comments, Final result of analysis is Below:

People with below features, are more likely to subscribe the product:

Education – [Secondary, Tertiary]

Marital Status – [Married, Single]

Month in which customers are not more likely to subscribe - [sep,march,oct,dec,jan]

Job - [management,technician,blue-collar]

Age Range – above 25 or 25

Contact Stream - Cellular

Personal Loan – no

SUGGESTIONS:

- Campaign will be much effective if it start in other months than mentioned above
- Customers should be contacted via cellular devices.
- Customers with no Personal Loan would be approached first.
- Can include extra items/gifts for married customers , customers with age>=25

REFRENCE:

PORTUGESE BANK MARKETING DATA AVAILABLE OPEN: [HERE](#)