**Project**

#Exploratory Data Analysis Project ( EDA of Bank Data)

#The aim of the project is to predict if the client will subscribe (yes/no) to a term deposit.

# age: age of a person

# job: type of job

# marital: marital status

# education

# default: has credit in default? ('no','yes','unknown')

# balance: average yearly balance

# housing: has housing loan? ('no','yes','unknown')

# loan: has personal loanduration ? ('no','yes','unknown')

# contact: contact communication type ('cellular','telephone')

# day: The day of the month when the contact was last made.

# month: The month of the year when the last contact was made.

# duration: The duration of the last contact in seconds.

# campaign: The number of contacts performed during the campaign for the individual.

# pdays: The number of days that passed after the last contact from a previous campaign. A value of -1 indicates that the

# individual was not previously contacted.

# previous: The number of contacts performed before this campaign for the individual.

# poutcome: The outcome of the previous marketing campaign (e.g. success, failure, others)

| **S. No** | **KPI** | **Visualization** | **Outcome** |
| --- | --- | --- | --- |
| 1 | Age vs Deposit. | Boxplot | not much distinction in age ranges - can't draw specific conclusions |
| 2 | Differentiating the population by marital status, using hue() function. | Boxplot | young married people are more inclined -  Aged people have more tendency to chose Deposit |
| 3 | Job vs Deposit | Countplot | apart from management, retired, unemployed and student categories, majority of population is preferring 'NO' |
| 4 | Marital status vs Deposit | Countplot | Single people are more inclined  Among the married people, more people are choosing against the deposit scheme  Among divorced couples, the data distribution is nearly similar for both options. |
| 5 | Education vs Deposit | Countplot | primary & Secondary sector, are more inclined towards No.  tertiary education sector, although more people have taken the deposit policy, we still have huge number of people against the policy |
| 6 | Default vs Deposit | Countplot | Among non defaulters, people opting against deposit is slightly higher than the ones opting for the scheme. |
| 7 | Balance vs Deposit | Boxplot | the population with lower balance are not very much interested into deposit scheme  There are more outliers under 'No' category. Meaning, even if people have high balance amount, they are not showing interest in the scheme. |
| 8 | Balance vs Housing & deposit | Boxplot | If people have balance and capacity, housing loan is not playing much role in deciding for the deposit scheme as the trends are similar. |
| 9 | Balance vs loan & deposit | Boxplot | If people have balance and capacity, loan is not playing much role in deciding for the deposit scheme as the trends are similar. |
| 10 | day & deposit. | Boxplot | It has been observed that 2nd and 3rd week are good for campaign to influence the population. |
| 11 | duration & deposit & job. | Boxplot | the calls that went longer has turned positive outcome  business calls(shorter) were unable to influence them |
| 12 | campaign & deposit. | Boxplot | people have decided fairly quickly(within 2-4 campaigns) whether they will be opting in or out for deposit  The people sticking to 'No' decision after a certain number (say 10) the business should mark them 'Not INTERESTED' category and stop calling them. |
| 13 | pdays & deposit | Boxplot | Bulk of the population choosing Yes for deposit scheme are those that were contacted again within 100 days after a previous campaign ended.  Some people remained against deposit scheme even approached regularly after previous campaign. |
| 14 | previous & deposit. | Boxplot | Bulk of the population choosing Yes for deposit scheme are those that were contacted fewer times earlier before current campaign.  For the higher number of previous contacts, the decision of people remained unchanged i.e 'No', |
| 15 |  |  |  |

**# Overall Insights :**

# In this project, the dependent variable was analysed individually with each of the independent variable of the dataset.

# Various statistical observations were made and visualization charts were developed.

# On analysing the past trends, it has been observed that camapigns were successful with small percentage.

# Previous campaigns have not drawn a massive customer base towards the deposit scheme.

# There may be issues in not targeting the right customer demographics, or not offering the best deals to customers.

# There could be a need of improvement in how the customers are approached and

# if the customer care staff needs retraining to identify issues and improve marketing communication.

# The business team needs to do further analysis of similar deposit schemes available in market and identify the selling points missing from the scheme.