

# Proposal:

## Banking | Marketing | Leads Conversion Data

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### ➤ INTRODUCTION

- a bank faces challenges with lead conversions. The primary objective of this division is to increase customer acquisition through digital channels.
- The primary goal of any company is to generate as many leads as possible. A company must guide prospects down the sales funnel with relevant content and offers towards their purchase.
- In this dataset and use case we supposed the strategy of marketing division of the bank to identify Qualified Lead and Potential Customers is identifying by loan requested as an offer and approving requesters as leads' segments having a higher conversion ratio to be customers .
- A marketing lead is a person who shows interest in a brand's products or services, which makes the person a potential customer.

### ➤ GOAL

Help to increase customer acquisition

**Machine learning problem** : Classification

## ➤ FROM

**Kaggle :**

<https://www.kaggle.com/datasets/arashnic/banking-loan-prediction>

## ➤ FEATURES

- **ID** : Unique Customer ID
- **Gender** : Gender of the applicant
- **DOB** : Date of Birth of the applicant
- **LeadCreationDate** : Date on which Lead was created
- **City\_Code** : Anonymised Code for the City
- **City\_Category**: Anonymised City Feature
- **Employer\_Code**: Anonymised Code for the Employer
- **Employer\_Category1** : Anonymised Employer Feature
- **Employer\_Category2**: Anonymised Employer Feature
- **Monthly\_Income** : Monthly Income in Dollars
- **CustomerExistingPrimaryBankCode** : Anonymised Customer Bank Code
- **PrimaryBankType**: Anonymised Bank Feature
- **Contacted**: Contact Verified (Y/N)
- **Source** : Categorical Variable representing source of lead
- **Source\_Category**: Type of Source
- **Existing\_EMI** : EMI of Existing Loans in Dollars
- **Loan\_Amount**: Loan Amount Requested
- **Loan\_Period**: Loan Period (Years)
- **Interest\_Rate**: Interest Rate of Submitted Loan Amount
- **EMI**: EMI of Requested Loan Amount in dollars
- **Var1**: Anonymized Categorical variable with multiple levels

- **Approved:** (Target) Whether a loan is Approved or not (1-0)  
• Customer is Qualified Lead or not (1-0)

## ➤ QUESTIONS ANALYSIS

- 1) What is gender of the applicant that most frequent ?
- 2) What is average monthly income for each gender?
- 3) IS loan amount affect approved ?
- 4) Is age of applicant affect approved ?
- 5) Is there a relationship between loan amount and loan period ?
- 6) At what age is the demand for loan ?
- 7) Is interest rate affect employee's demand for loans ?

I will ask a few questions during the presentation.

### Data set contains

- 69713 entries (from 0 to 69712)
- 22 columns

## ➤ DATA PROBLEMS

- Missing Data
- Outliers
- Duplicated values

## ➤ DATA PREPROCESSING

- Work with categorical data

- Handle Imbalance data
- Feature Scaling