

# Lending Class Club Study

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# Lending Club

These are separate organization who evaluates the requested loan from the borrower and decide the amount to be funded.

In this case study, our objective is to help the organization to make more profit by analyzing the past data.

We analyze the data provided and propose recommendations on key factors that indicates if the borrower is going to be defaulter.

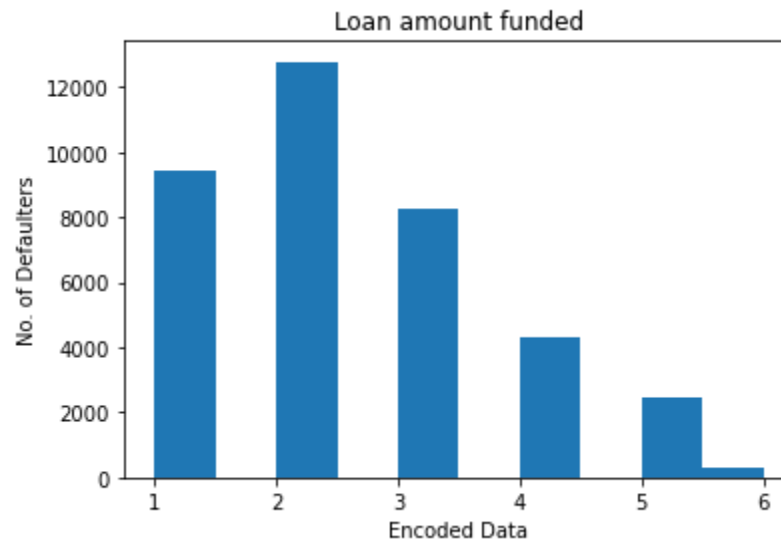
# Key Indicator

- Out of 111 given variables we have sorted out around 45 columns that influence defaulter.
- Out of 45 columns we have selected 15 variables which are as follows

# Key Parameters

## Loan Amount Funded

- It is observed that the loan amount between 5001 and 10000 has maximum number of defaulter. So need to be analysed other parameters for lending loan at this range

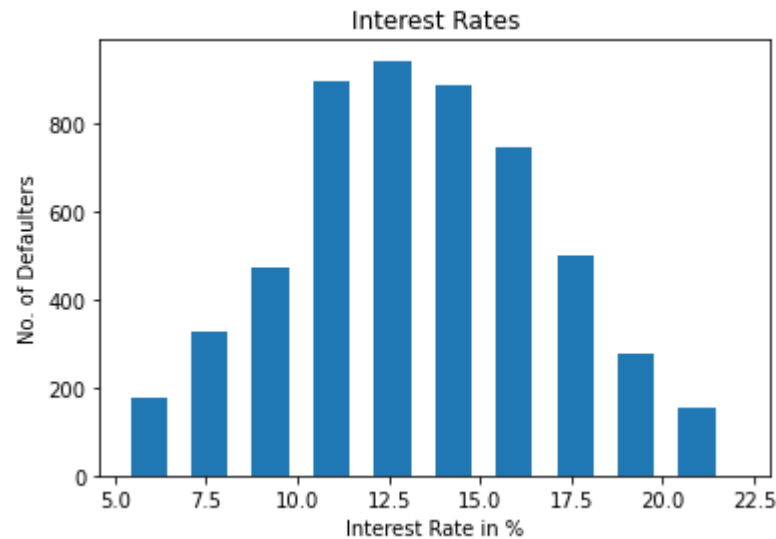


- The x axis is encoded. 2 refers to loan amount between 5001 and 10000

# Key Parameters

## Interest Rate

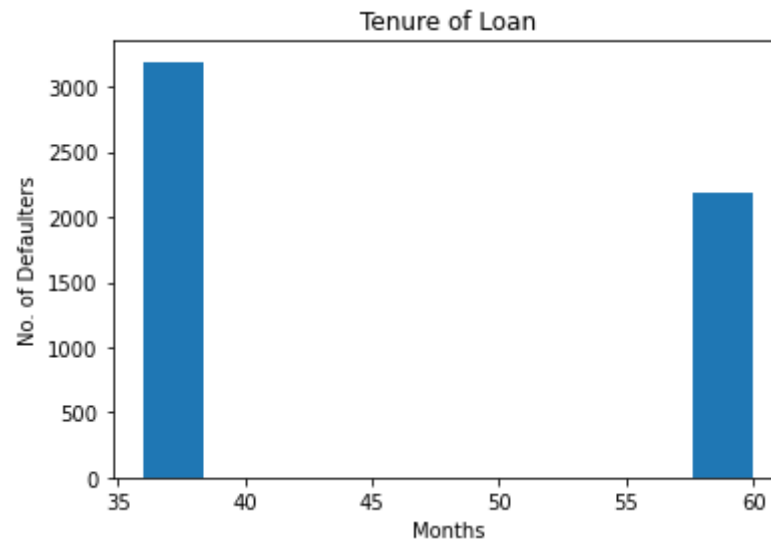
- It is observed that the interest rate between 10% and 17.5 % has maximum number of defaulter.



# Key Parameters

## Tenure of loan

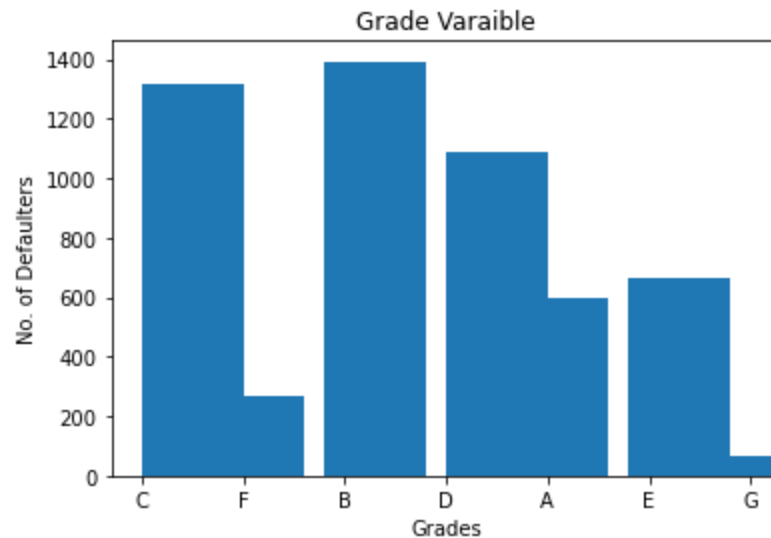
- It is observed that 36 months of loan tenure has more defaulters, so recommended to have more than 36 month tenure for loans.



# Key Parameters

## Grade of Borrower

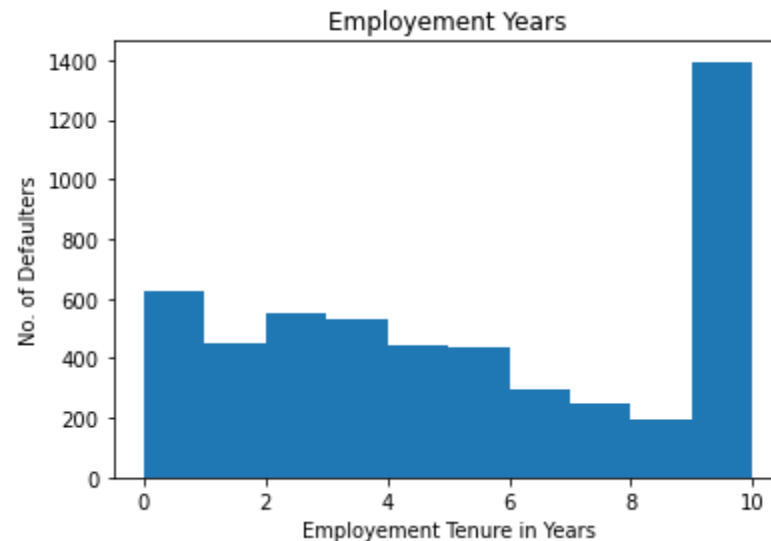
- Grade B,C and D are most like to default. So provide less amount of loans to these category.



# Key Parameters

## Length of employment

- It is observed that whoever is employed for more than 10 years they are more likely to default.
- Recommend to provide more number of loan to lesser than 10 years of work experience

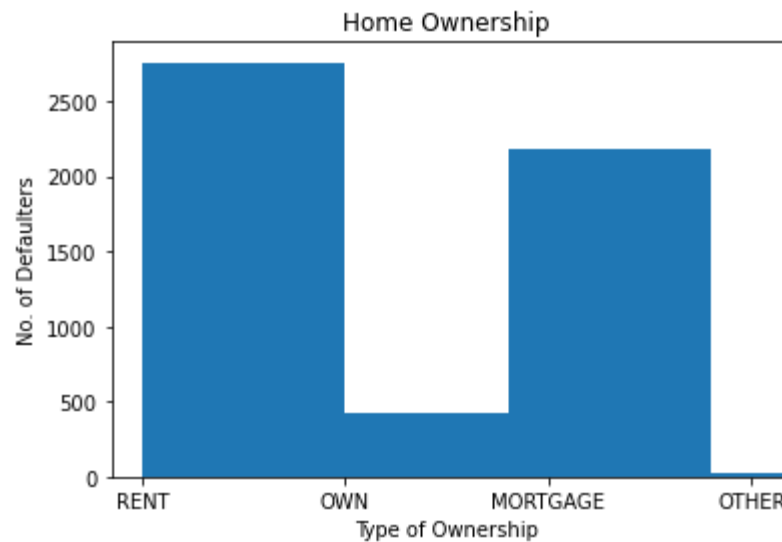




# Key Parameters

## Ownership of residency

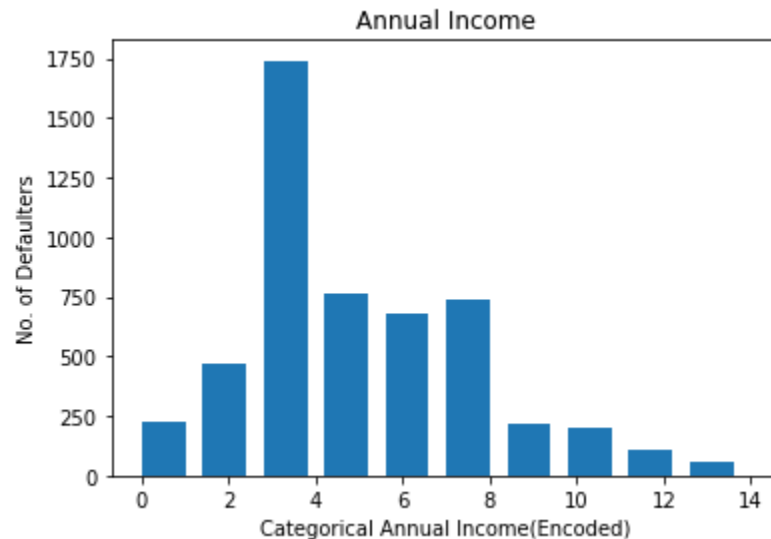
- It is observed that whoever is residing in rent or his/her house is mortgage, they are more likely to default.
- Recommend to provide less amount of loan to those who is staying in rent or their house is in mortgage



# Key Parameters

## Annual Income

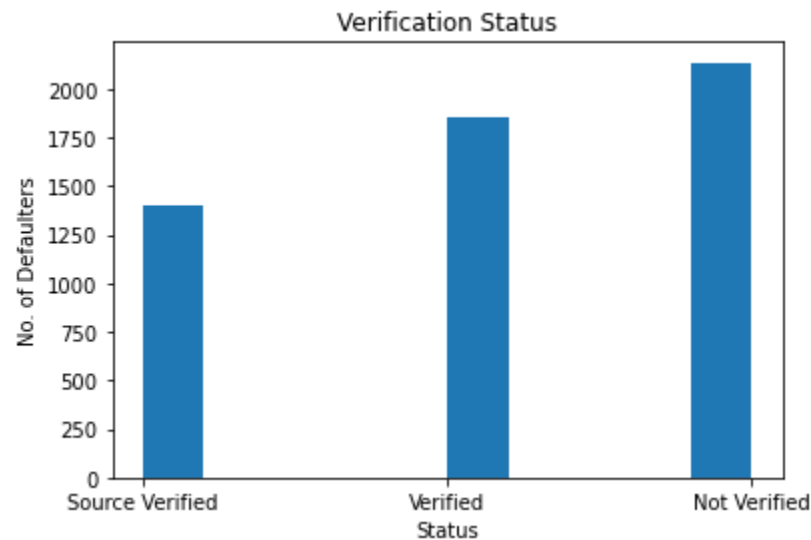
- It is observed that whoever yearly income is between 30000 to 39999 they are more likely to default.
- Here x axis is actually encoded and encoded value 3 means income between 30000 to 39999



# Key Parameters

## Verification of Source

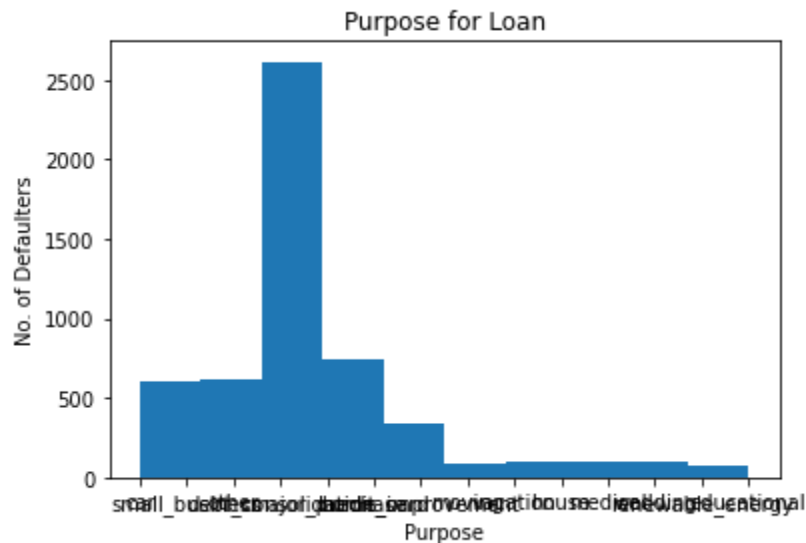
- It is observed that non verified borrower tend to default more, so recommend to verify each borrower before funding the loan



# Key Parameters

## Purpose of loan

- It is observed that if loan is taken for loan consolidation, then they are the most likely to default. Recommend lesser loan amount approval for them



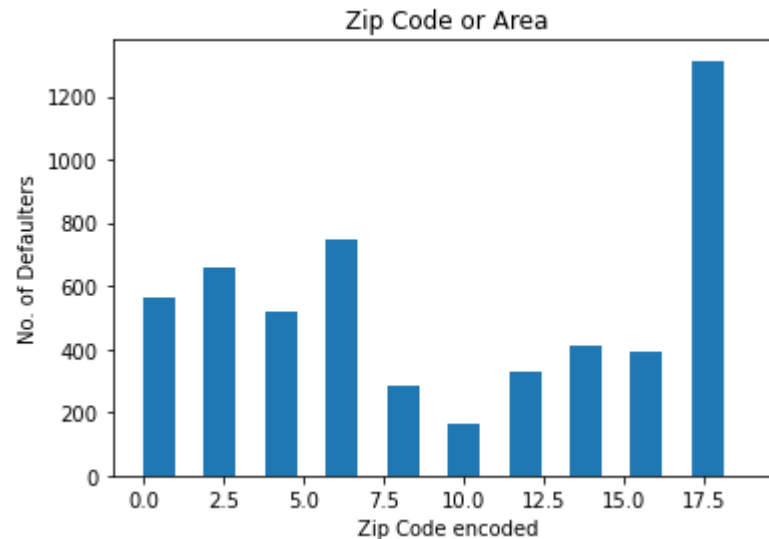
Value count of column purpose:

debt_consolidation	2614
other	616
credit_card	526
small_business	445
home_improvement	334
major_purchase	221
car	159
medical	103
wedding	95
moving	92
educational	56
vacation	53
house	52
renewable_energy	18
..	..

# Key Parameters

## Zip Code

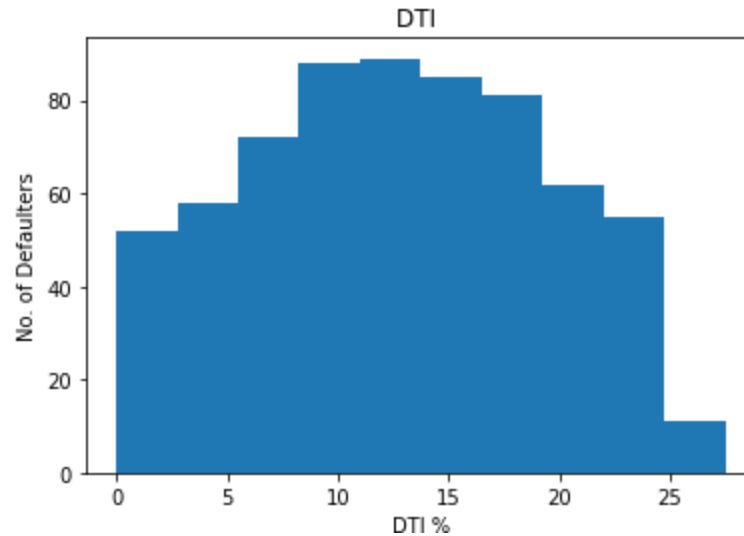
- It is observed that people residing at pin code starting 875, more likely to default.
- Here x axis is encoded so 17.5 corresponds to 875xx pin codes.



# Key Parameters

## DTI

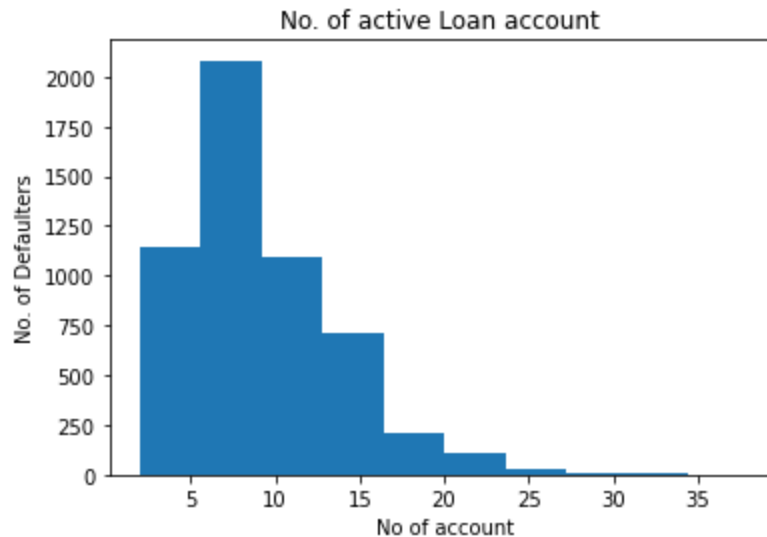
- DTI of 14 is most likely to default



# Key Parameters

## Active Loan Account

- It is observed that borrowers having active loan account between 5 and 10 are more likely to be defaulters, so recommended to reduce loan amount for these category of borrower.



# Key Parameters

## Public Record

- It is observed that borrower doesn't have any entry on public record are more likely to default

```
Value count of column pub_rec:  
0      4929  
1       445  
2        10
```