



LENDING CLUB CASE STUDY

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INTRODUCTION

The case study has been done in order to solve a business problem of what precautionary measures are to be taken by a consumer finance company before lending a loan so that it won't be charged off and will be repayed



APPROACH:

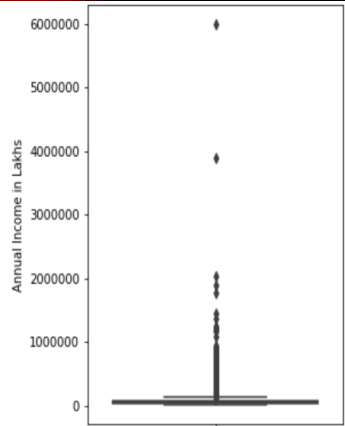
DATA CLEANING --- > UNIVARIATE ANALYSIS ---- > BIVARIATE ANALYSIS --- >
MULTIVARIATE ANALYSIS --- > CONCLUSION



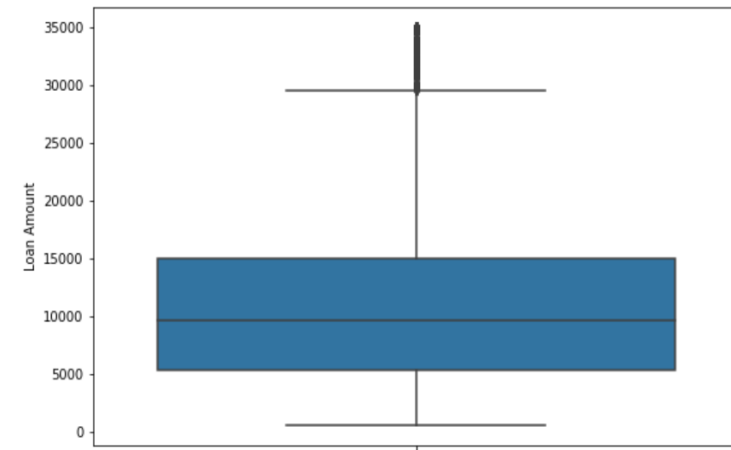
DATA CLEANING:

- Removed unnecessary columns
- Removed columns with majority of missing values and columns with more than 50 percent of null values
- Removed missing value rows in remaining columns
- Removed columns with only 1 distinct values
- Changed data types of columns
- Derived columns from the existing columns

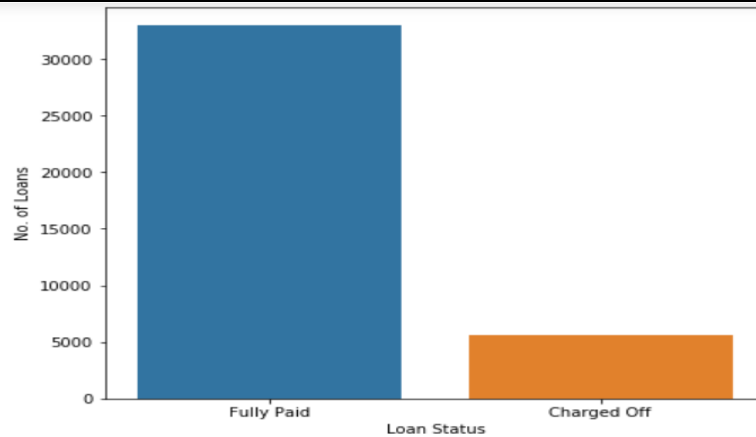
UNIVARIATE ANALYSIS



Inference: Most of the loan seeking people are having annual income below 20 lakhs and only two people are above the common cluster. Those two can be the outliers

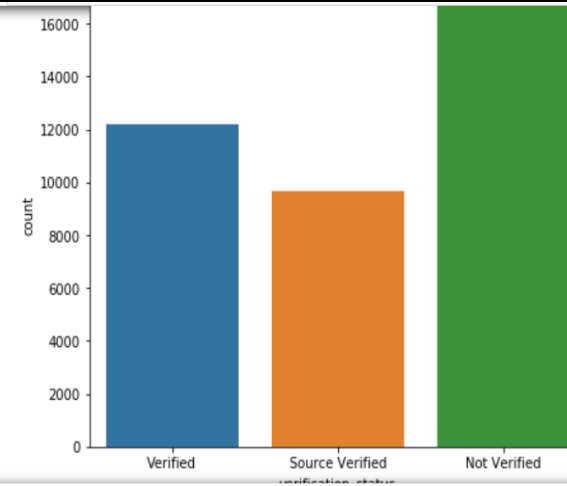


Inference: Loan Amount ranges from 0 to 35000 and mean of 10000



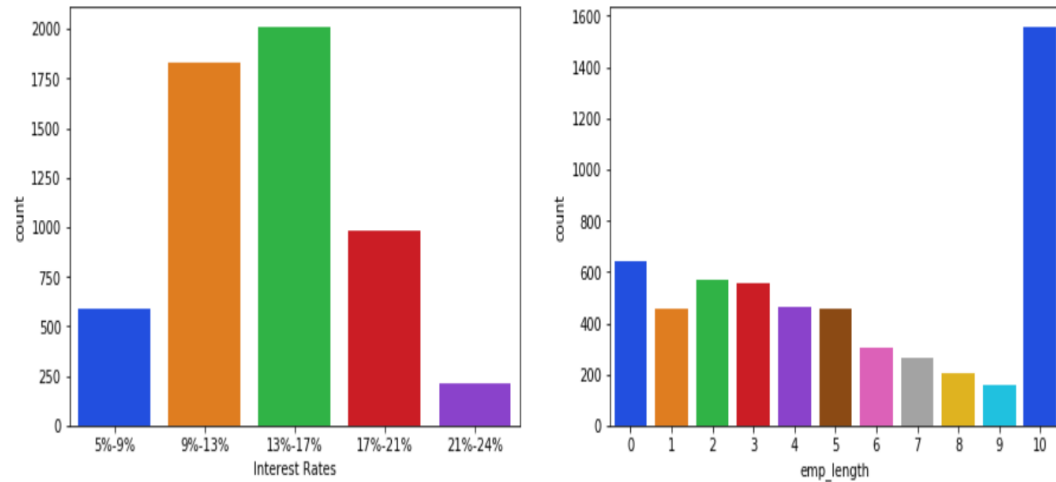
Inference: From The graph,

- more than 30000 loans are fully paid
- we are having 5000 defaulters

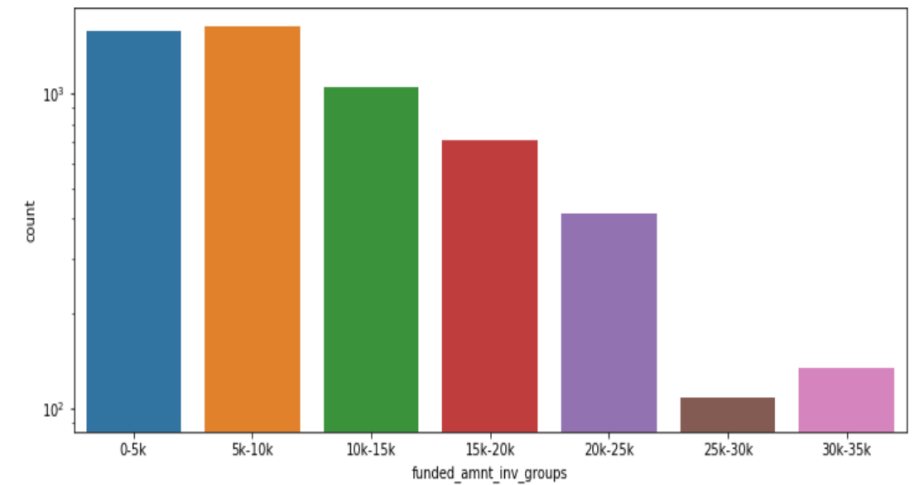


Inference: Most of the loans are not verified which might lead to a loss and it needs a proper drill down analysis

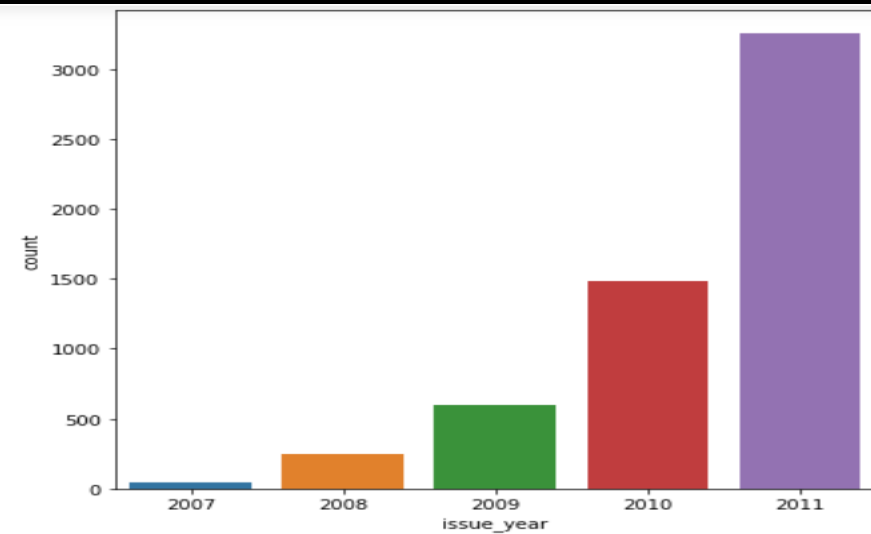
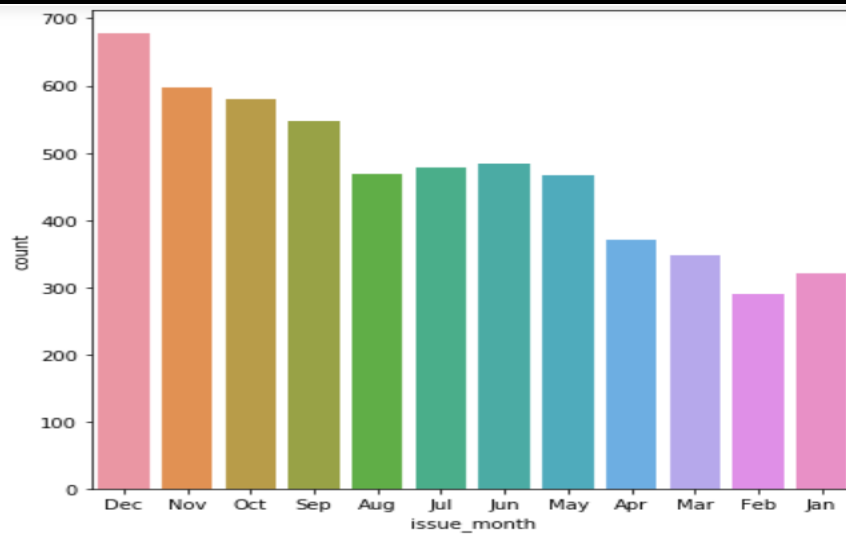
BIVARIATE ANALYSIS



Inference: Applicants who receive interest at the rate of 13-17% and Employment_length of 10 are major defaulters

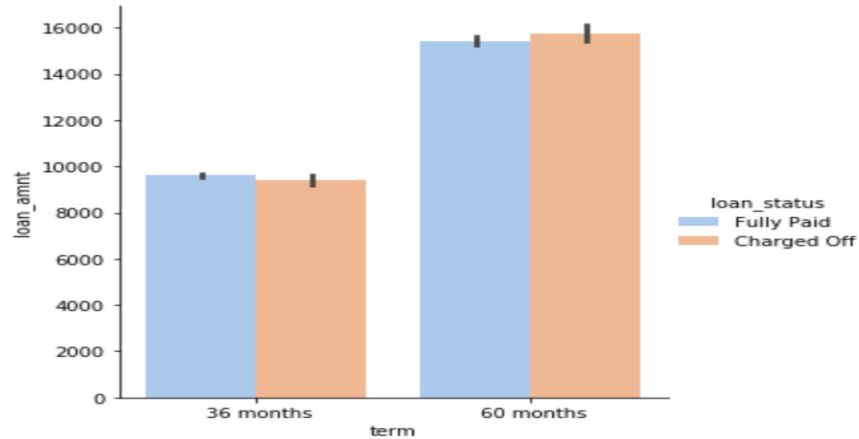


Inference: Defaulters when funded investment in 5000 to 10000

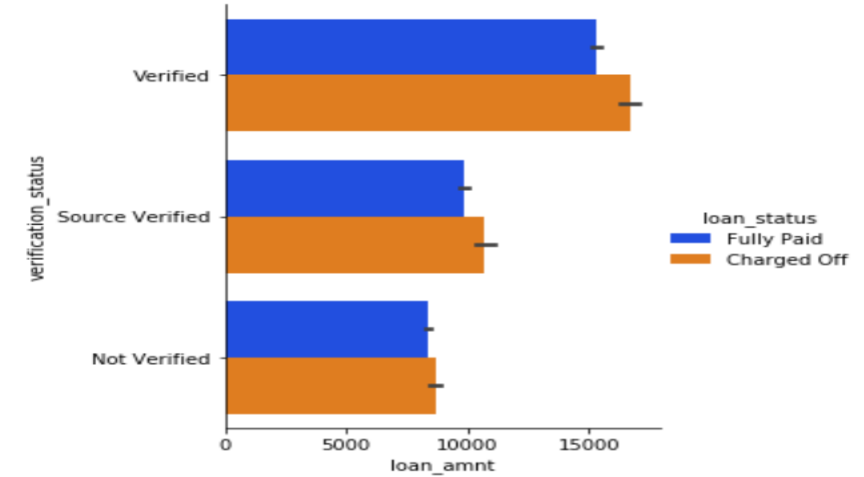


Maximum number of defaults occurred when the loan was sanctioned/issued in December. Loan issued in the year 2011 also has the highest defaults

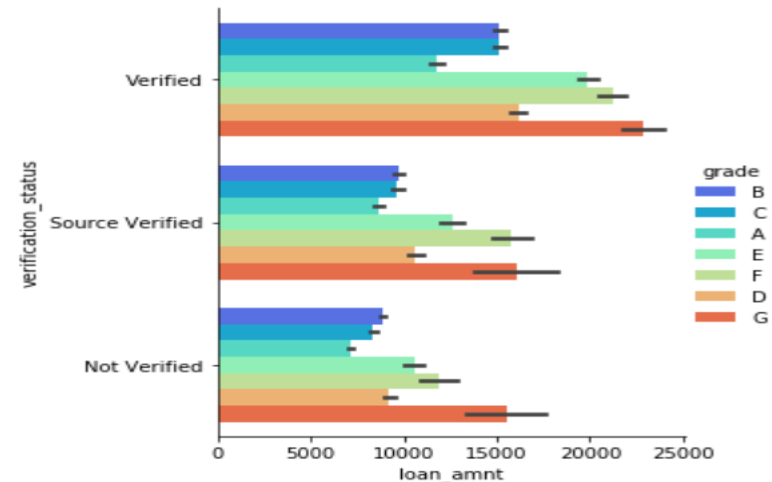
MULTIVARIATE ANALYSIS



Inference: loans with higher tenure has more defaulters



Inference: Defaulters are more in verified people as loan amount increases



Inference: Defaulters are more in grade G loans as loan amount increases in verified people

CONCLUSION:

- Most of the charged off loans were not verified
- Loans with interest rates from 13%-17% has more defaulters
- Defaulters are more from an employment experience of 10 or more years. Is it the over trust or the fake experience being submitted?
- Defaulters are more if the loan issued month is December
- Applicants with higher salary mostly applied loans for "home_improvment", "house", "renewable_energy" and "small_businesses" and fell into defaulters
- Debt_Consolidation has been the highest case where the loan is charged off