



# **LENDING CLUB CASE STUDY**

## **SUBMISSION**

**Rama Santosh Ravada  
(ACP-NLP -C54 Batch)**

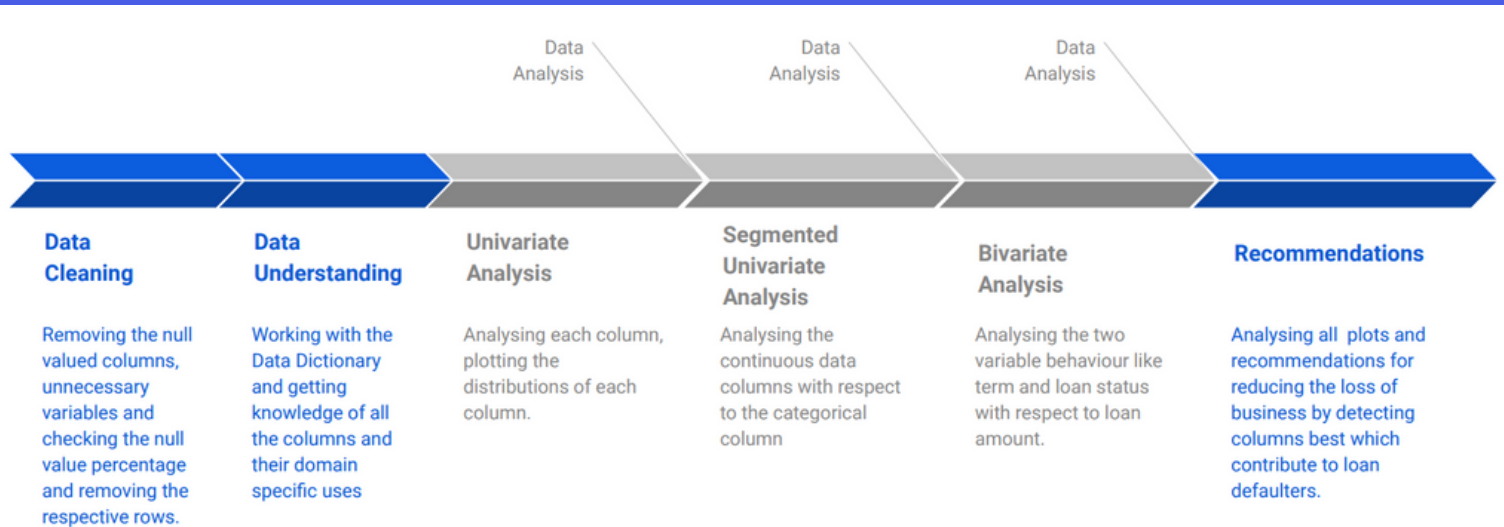


# Background & Problem Statement

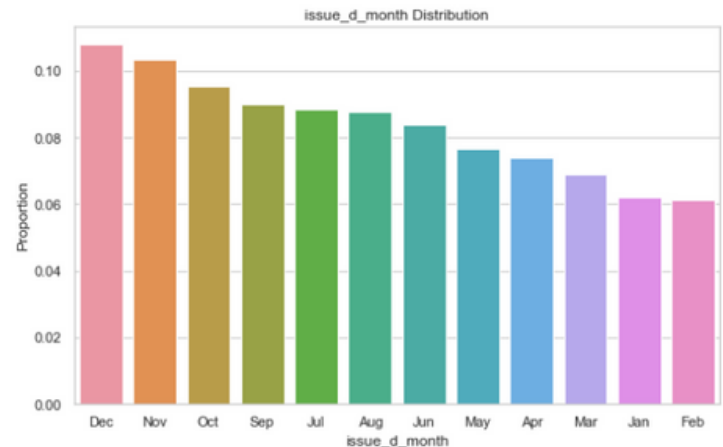
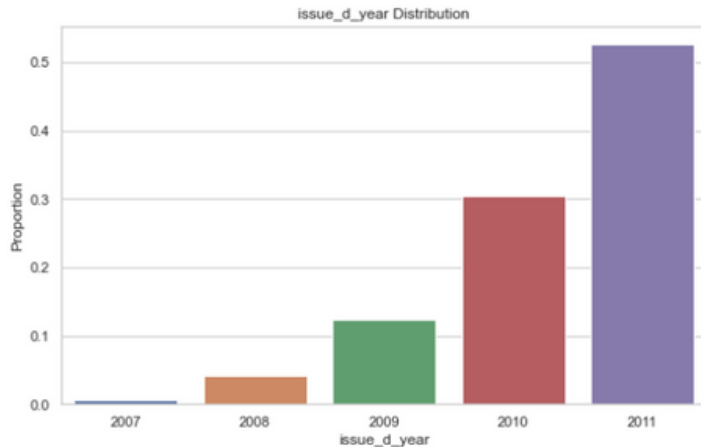
✓ **Background:** Lending Club is the largest online loan marketplace, facilitating personal loans, business loans and financing of medical procedures. It's largest source of credit loss is lending loans to 'risky' applicants.

✓ **Problem Statement:** Lending Club wants to identify the risky loan applicants, so that such loans can be reduced thereby cutting down the amount of credit loss. Our aim is to find the driving factors behind loan getting default.

# Problem Solving Methodology



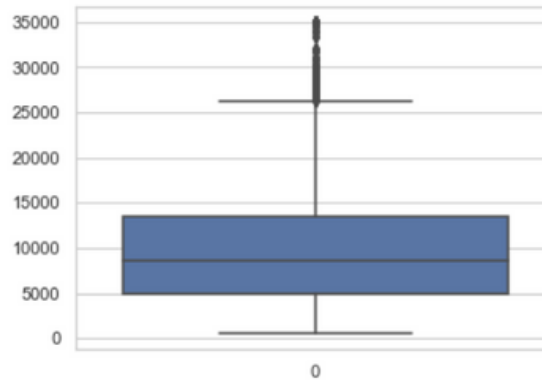
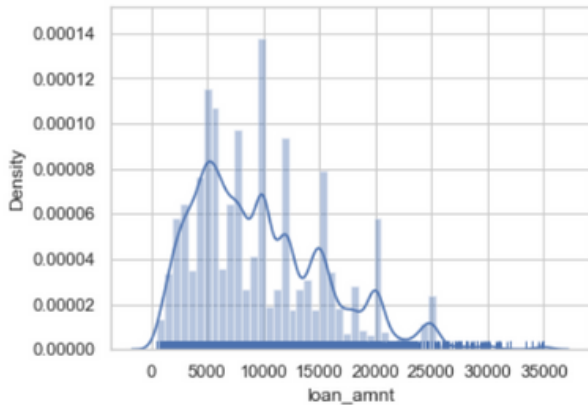
# Analysis



## Observations:

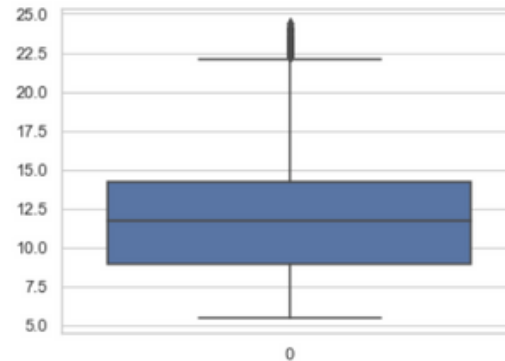
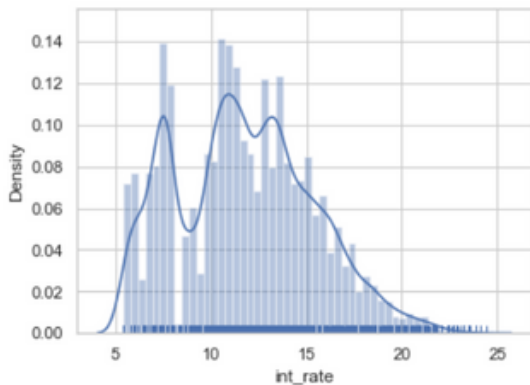
- The lending club has almost doubled loan issues every year.
- There are more issues of loan in last 3 months i.e., in the months of Oct, Nov and Dec.

Loan Amount distribution

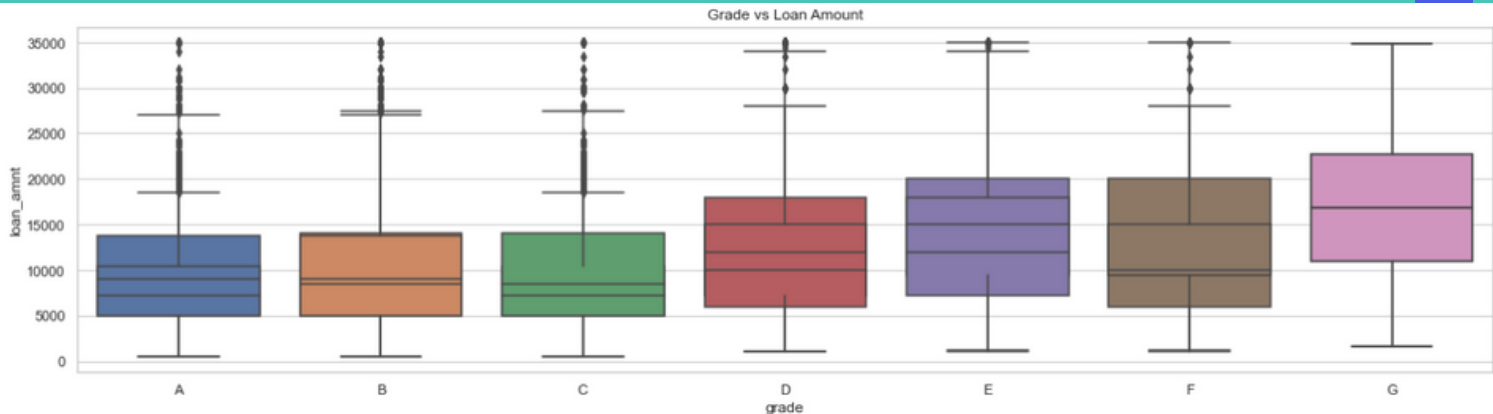


From these plots, we can infer that more number of people took loan amount of 8000+, and also median of distribution is 8000. And very few people took more than 23000 loan amount.

Interest Rate distribution



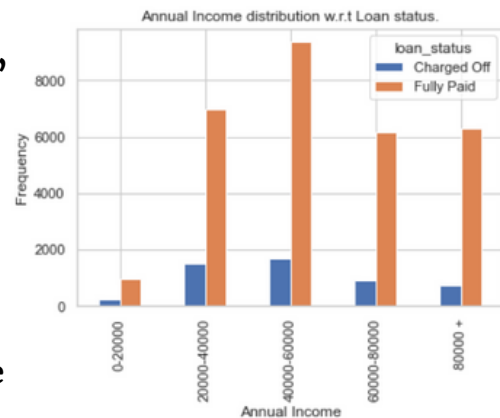
From these plots, we can infer that most of the customers comes under int rate bracket of 9 to 14.5%



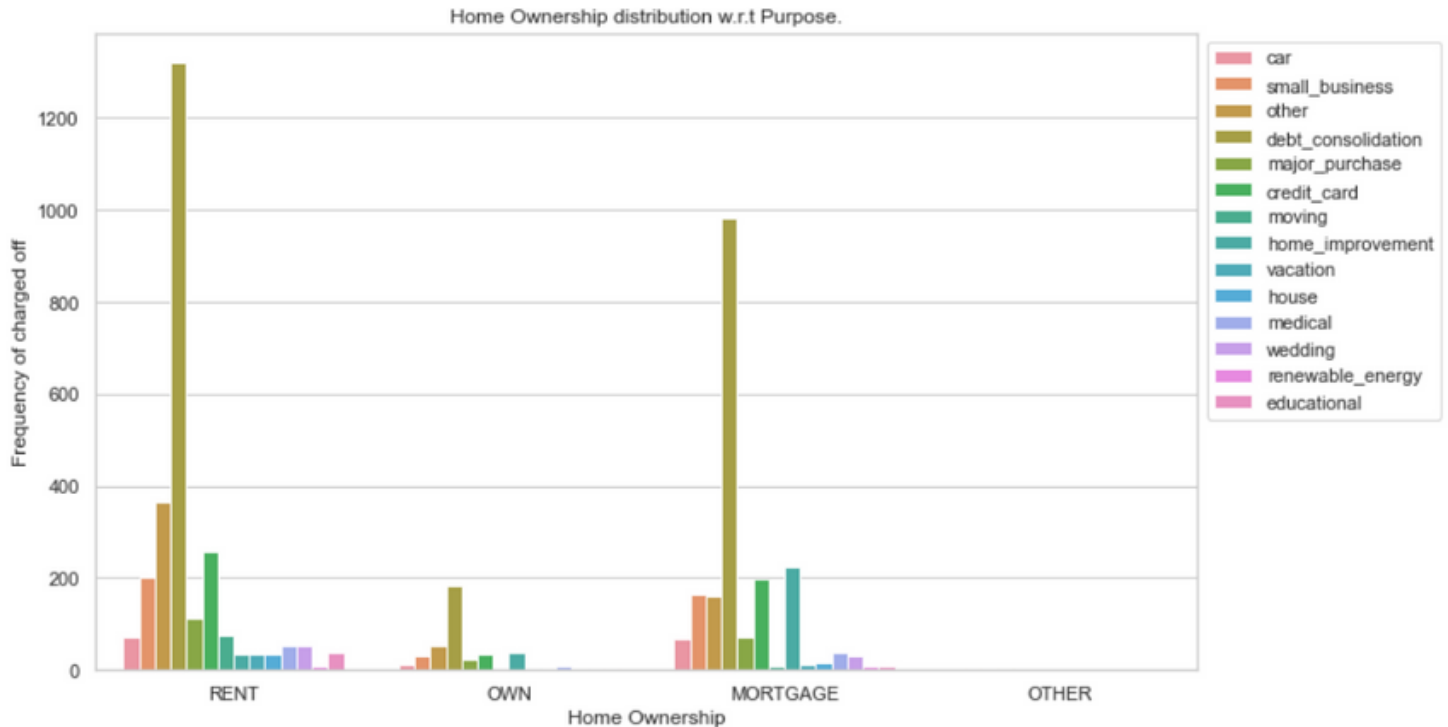
**From above boxplot, we can infer that Grade 'G' and 'H' have taken max loan amount. As Grades are decreasing the loan amount is increasing**



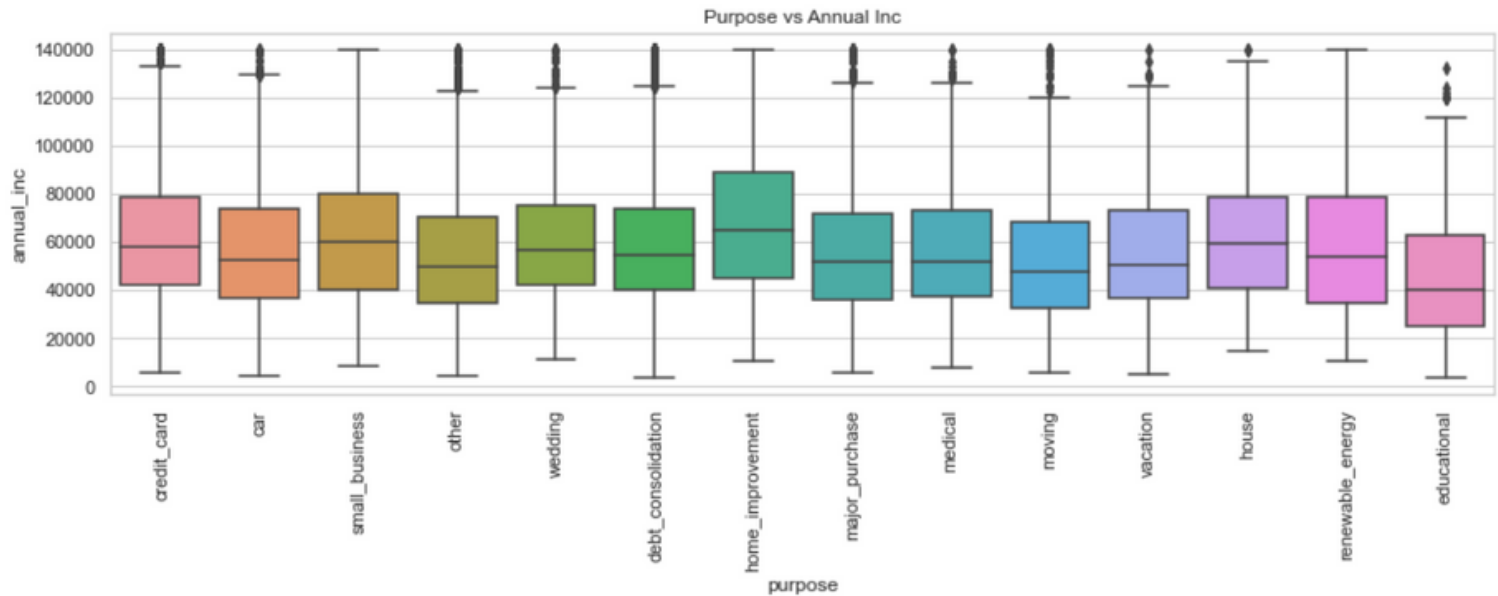
**From this we can infer that, under 14k most of the borrowers take the loan amount and charged off status is also high for those amount.**



**From above bar chart, we can infer that, most of the customers' annual income is in the range of 40k to 60k**

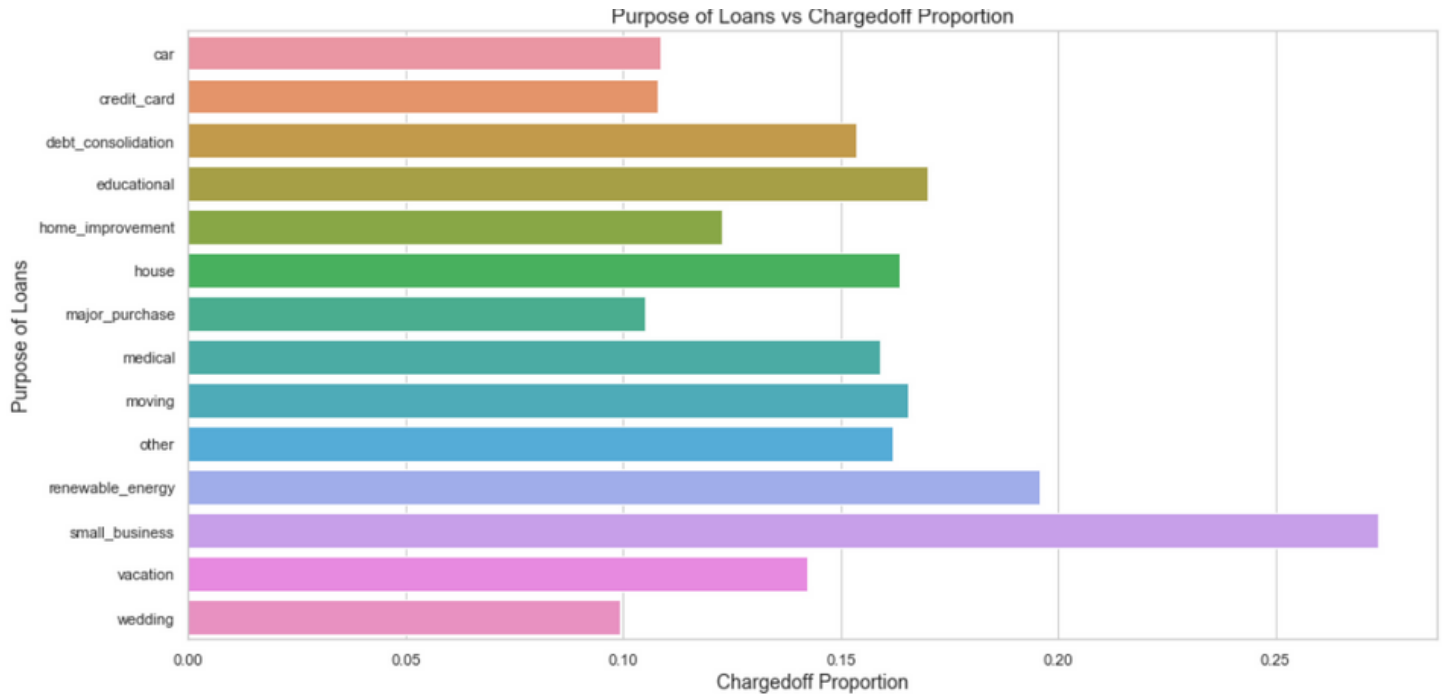


**From above chart we can say that, most of the borrower's who took loan for the purpose of debt consolidation has highest number of Charged off status and those who are in rent as the most.**

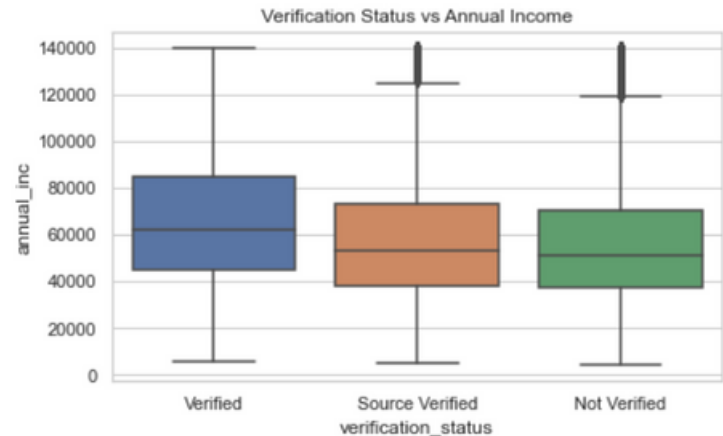
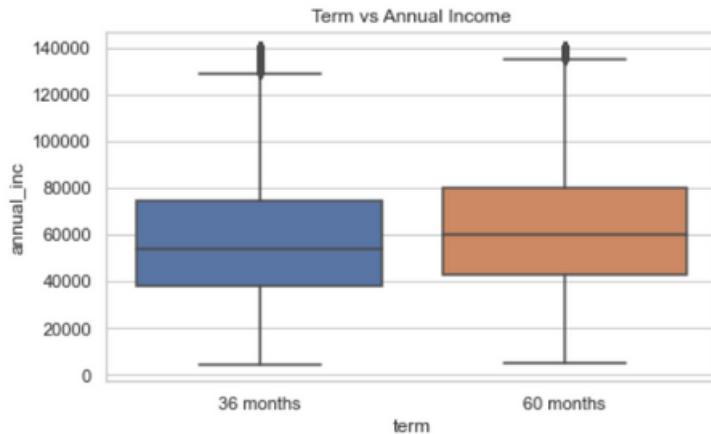


**On comparison of Annual Income vs Purpose variable, we can infer that, the borrowers who has high annual income are taking loans mostly for home improvement and small business.**

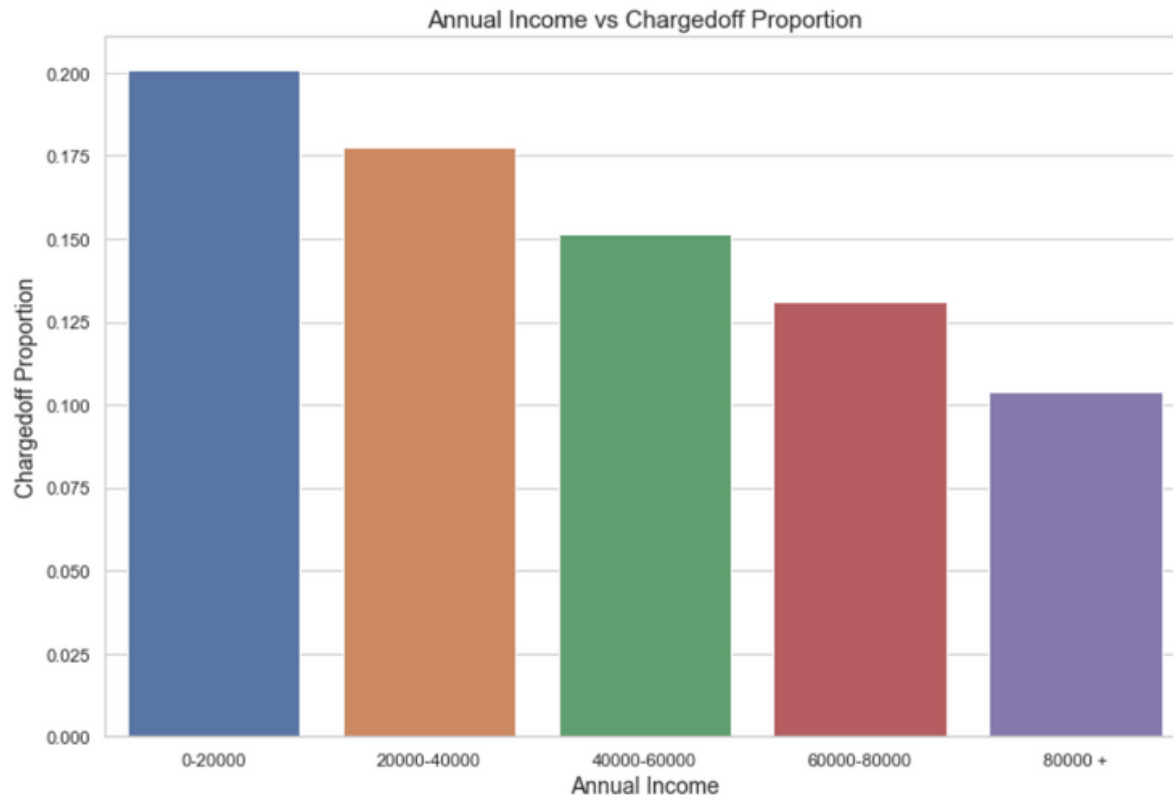




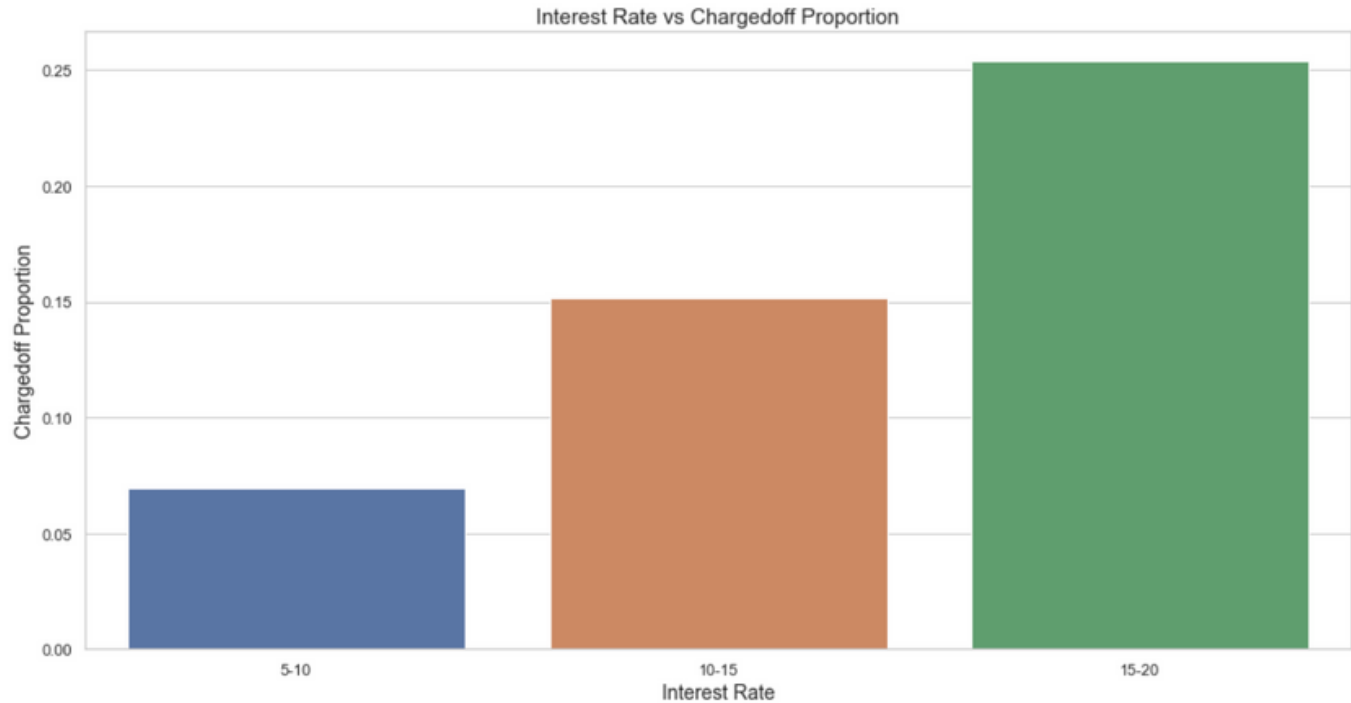
**From above chart, we can infer that the borrowers who take loan for small business are mostly defaulting**



- **On comparison of Annual inc Vs Term, we can infer that borrowers' having higher income consider 60months as term**
- **On comparison of Annual inc Vs Verification status, we can infer that borrower's having higher income are verified**



- From above chart we can infer that, as annual income is increases charged off proportion is decreases.
- Highest charged off proportion are in the range 0 to 20k annual income.



**From above chart, we can infer that as interest rates increases charged off percentage also increases**

## **Recommendations**

- 1. Lending Club should be wary of the loans where the purpose is Small Business as the percentage of a loan being charged off is maximum 27.1%.**
- 2. Lending club should be extra cautious giving loans for higher term as they have more chances of defaulting**
- 3. Higher the loan amount, the higher the chances of loan being charged off. Therefore Lending Company should consider accepting loans of lower amount and be cautious for higher amount. Hence the risk factor is low for lending club.**
- 4. Lending Club should consider accepting more loans from applicants whose annual income is greater than 100000 as their probability of charge off is minimum.**
- 5. Lending Club should consider accepting more loans where interest rate is less than 7.5% as their probability of charge off is minimum.**
- 6. Lending Club should consider accepting more loans of grade A and B. It should be cautious of loans falling in grades E,F and G**
- 7. Lending Club should consider accepting more loans from people who owns a house.**



**Thank  
You**