Case Study

# Lending Club

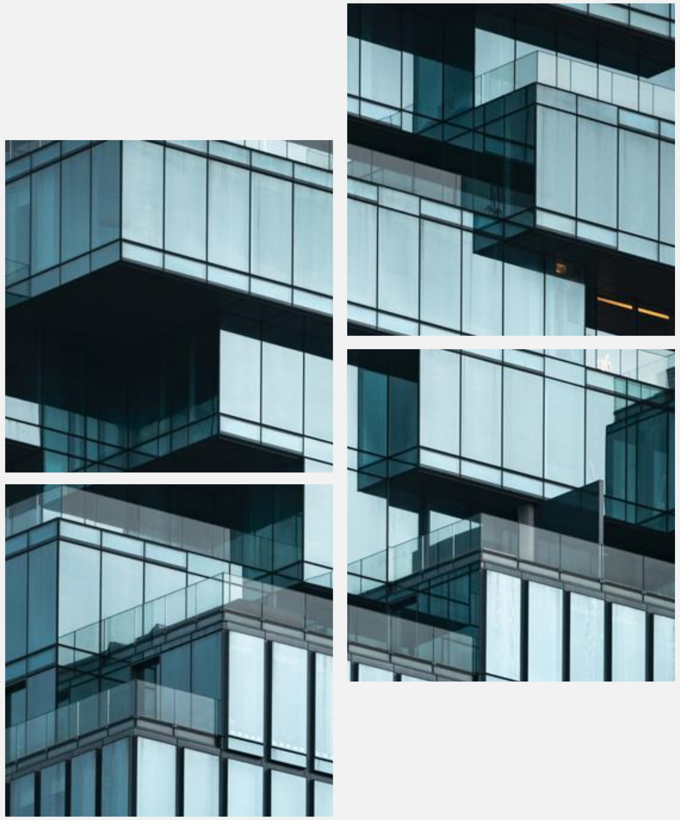
September , 2023

Titas Biswas

# Problem Statement

This company is the largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures. Borrowers can easily access lower interest rate loans through a fast online interface.

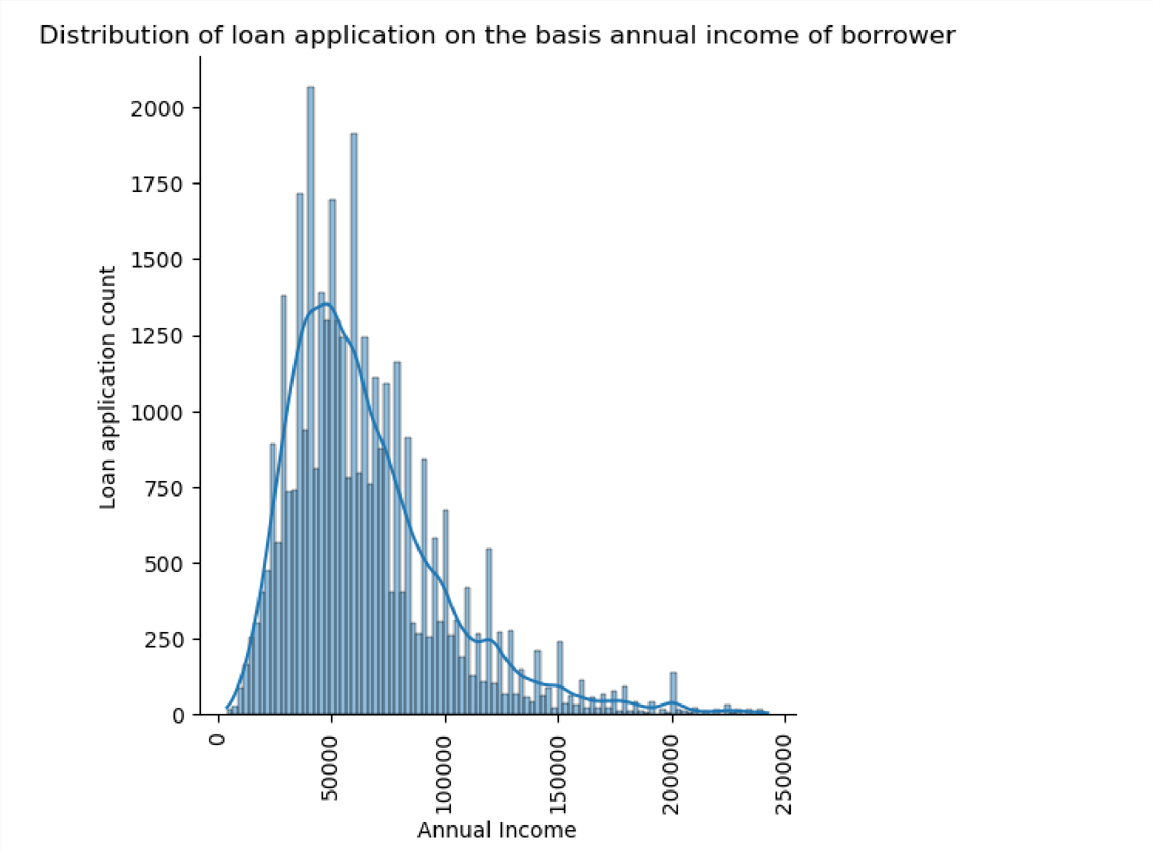
In order to felicitate that, one aspect, is to understand the driving factors (or driver variables) behind loan defaults.



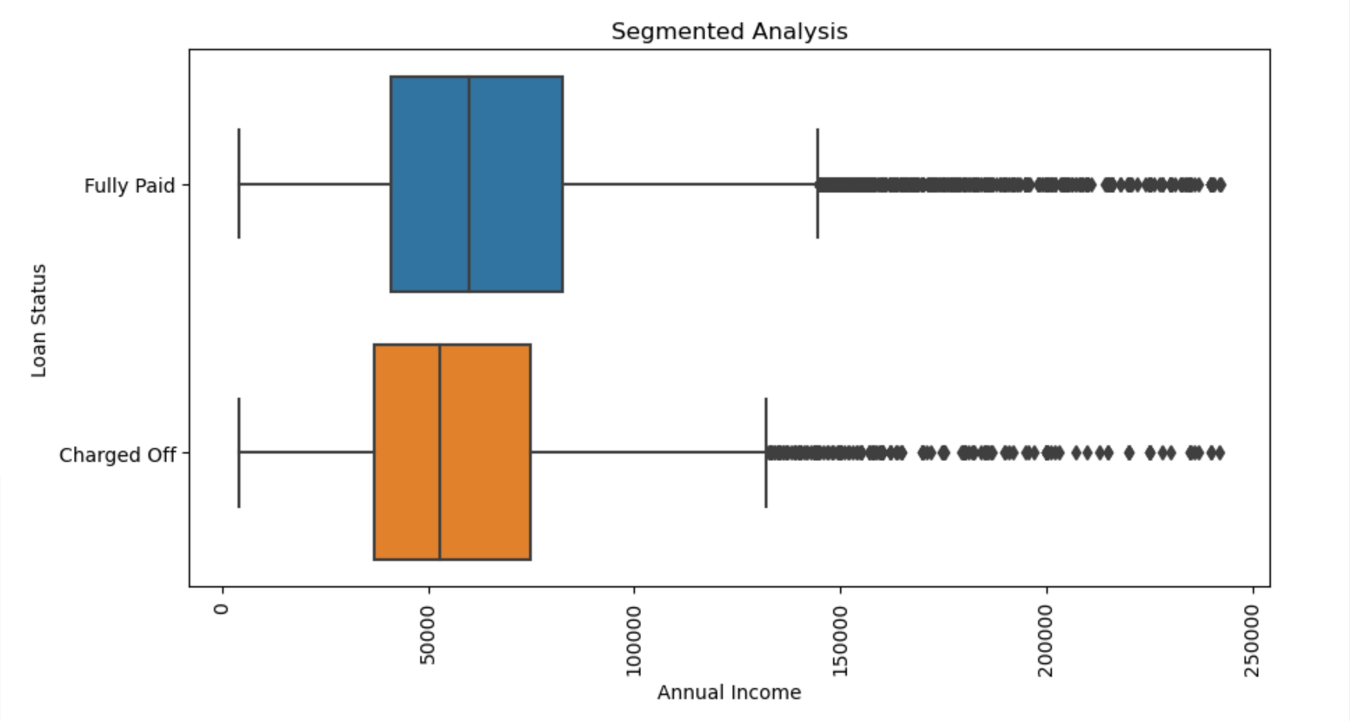
# Approach

Data Cleaning + Data Understanding + Univariate Analysis + Segmented Univariate analysis + Bivariate Analysis = Recommendations

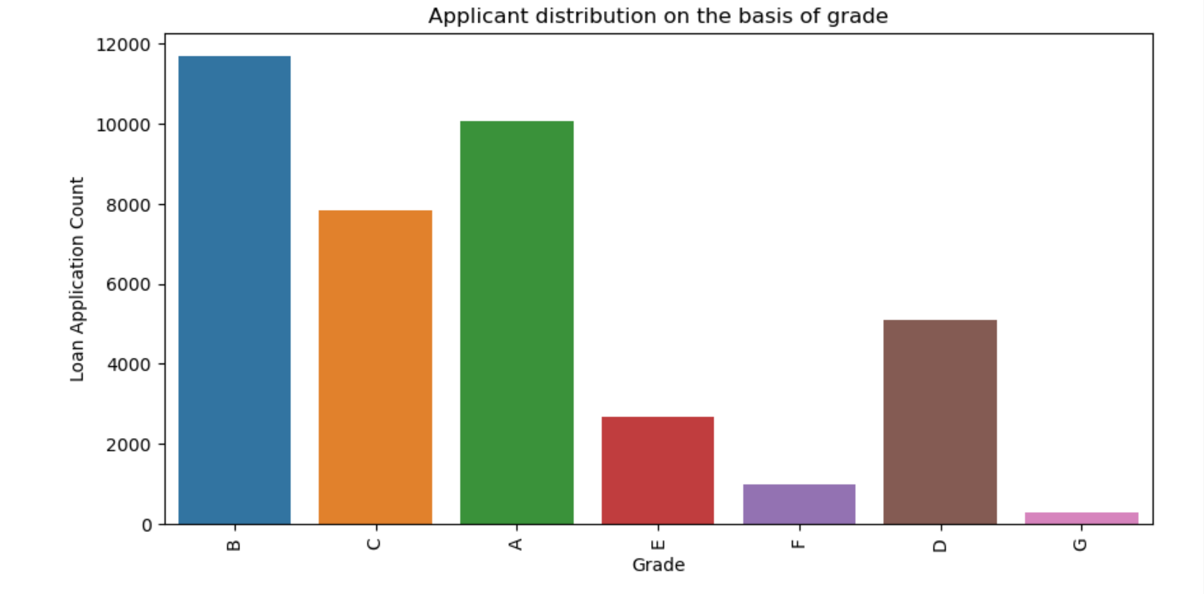
# Annual Income



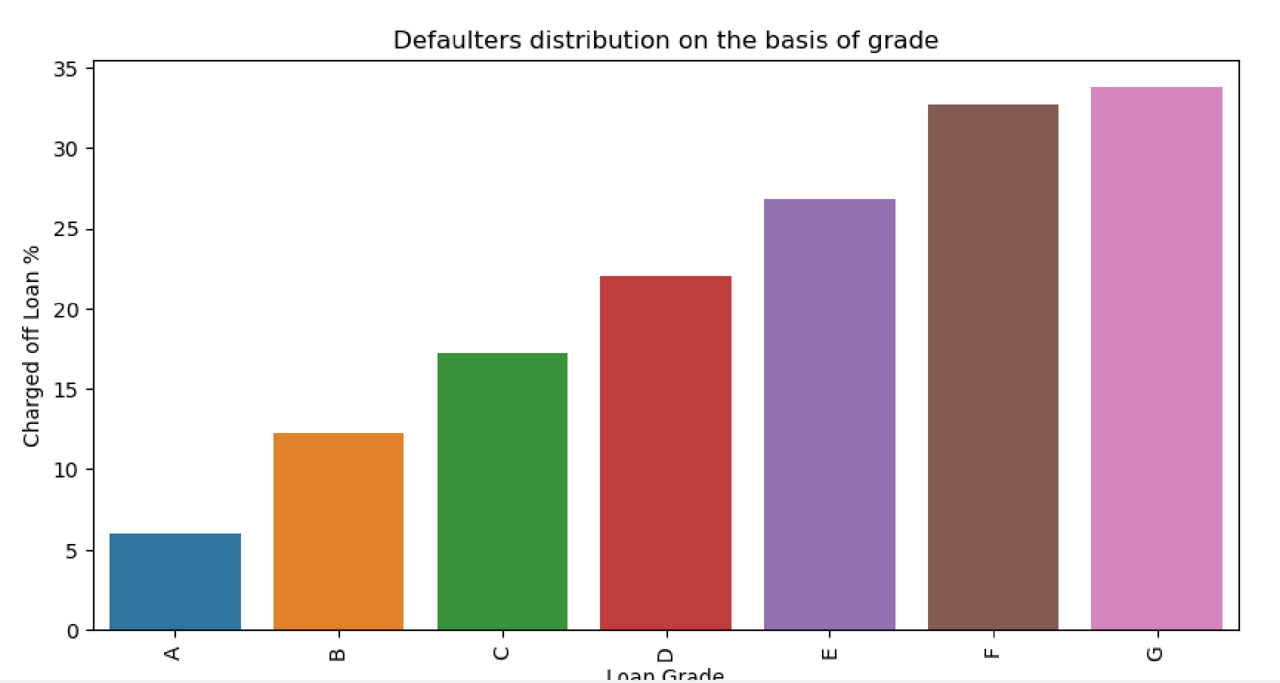

Borrowers with higher annual income contributed to lower number of defaulters



# Grade




The riskier the grade the higher the number of faulting in a consistent trend



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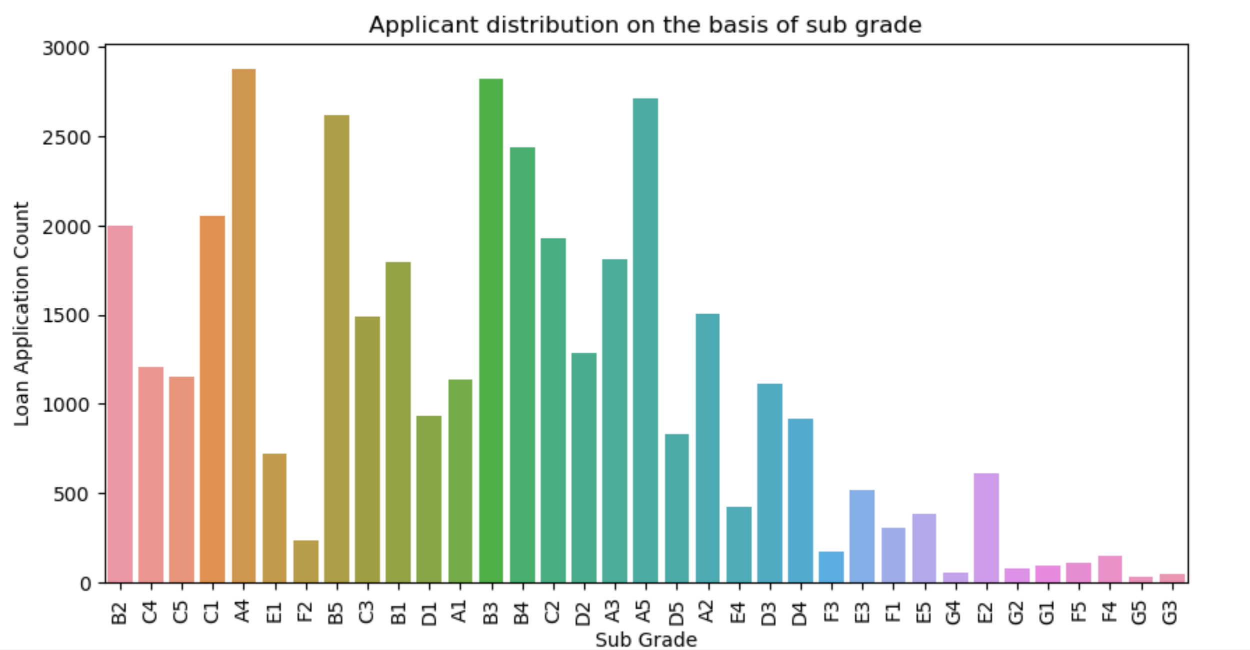
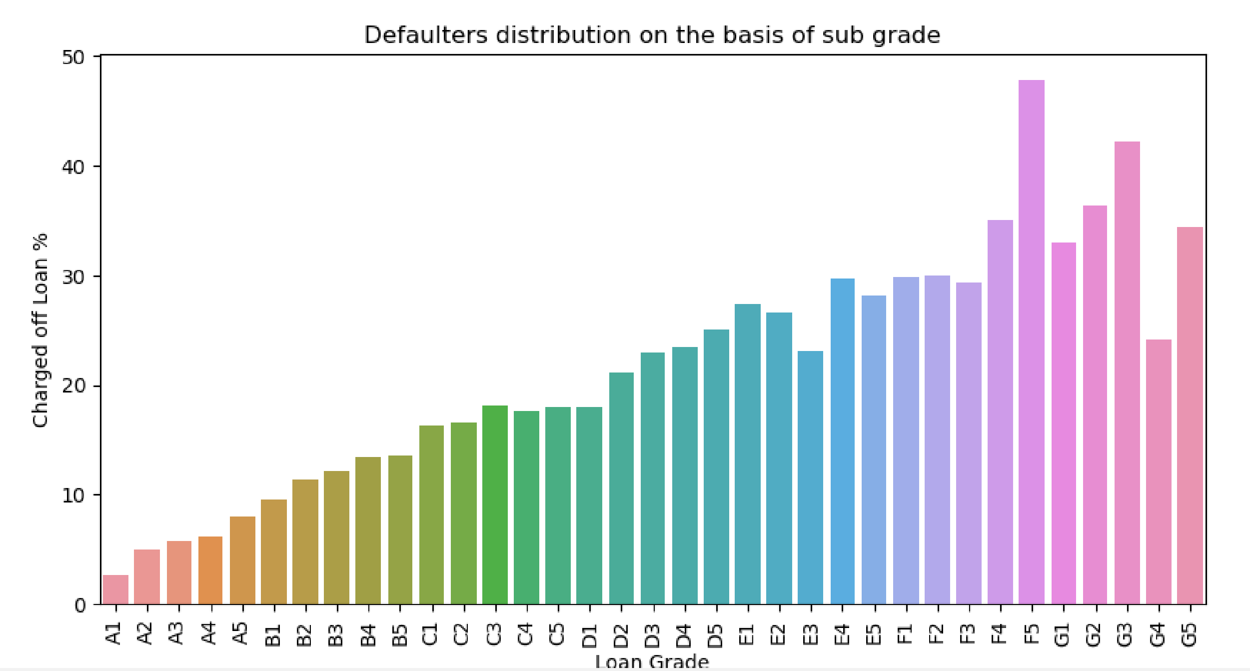
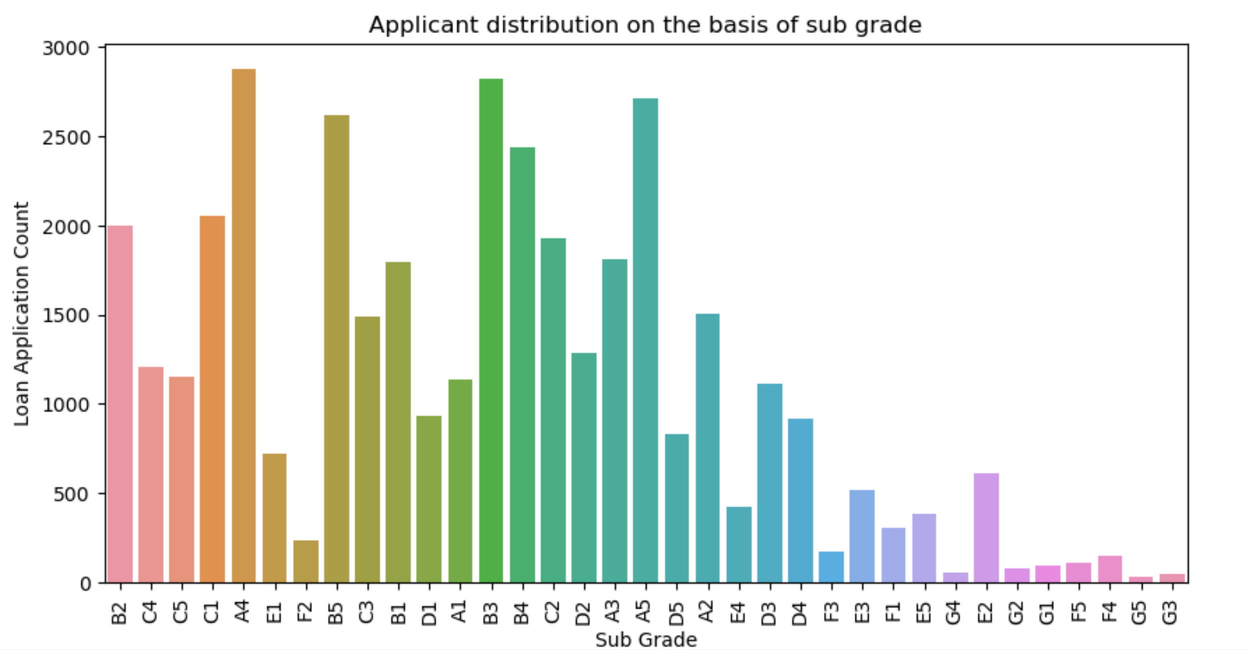



The same trend as grade is further confirmed with F5 and G3 contributes to highest defaulters



# Sub Grade

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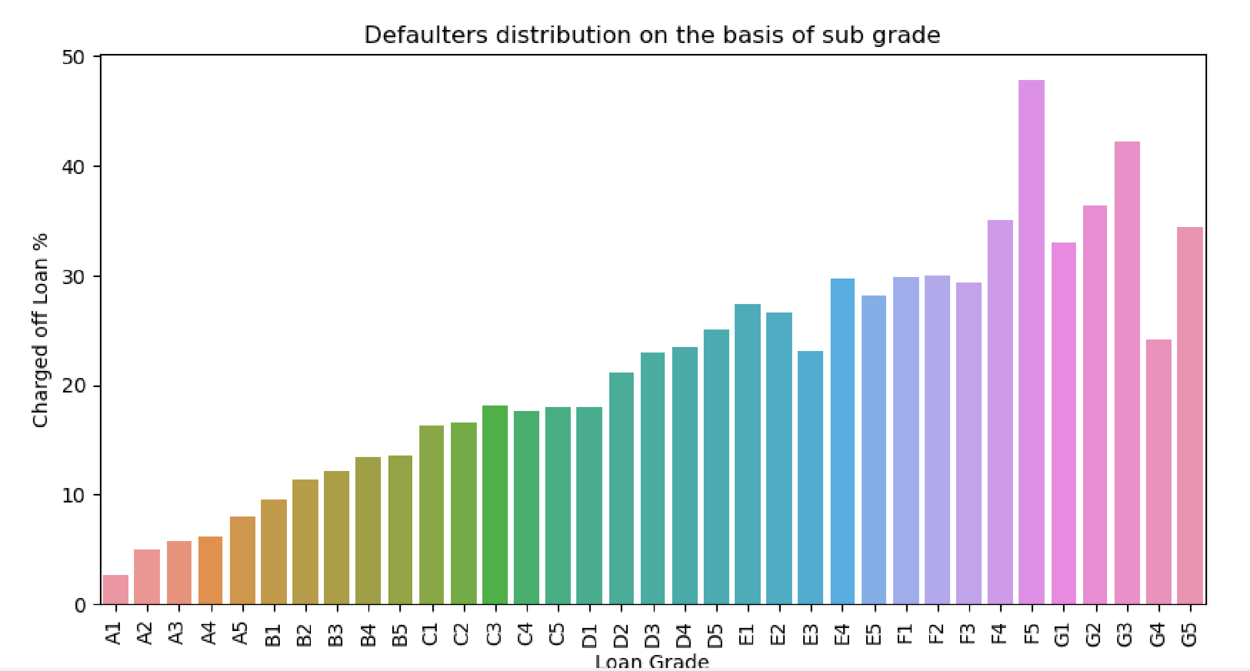
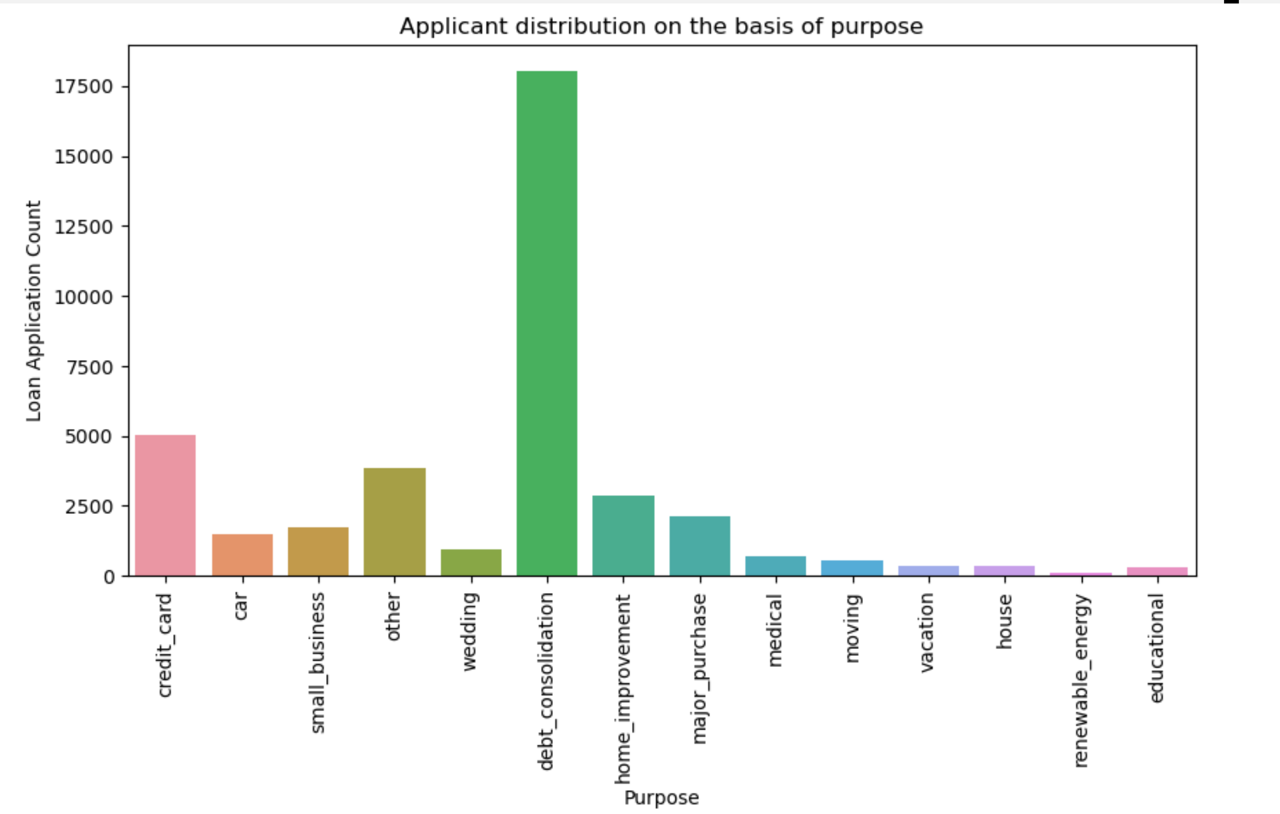
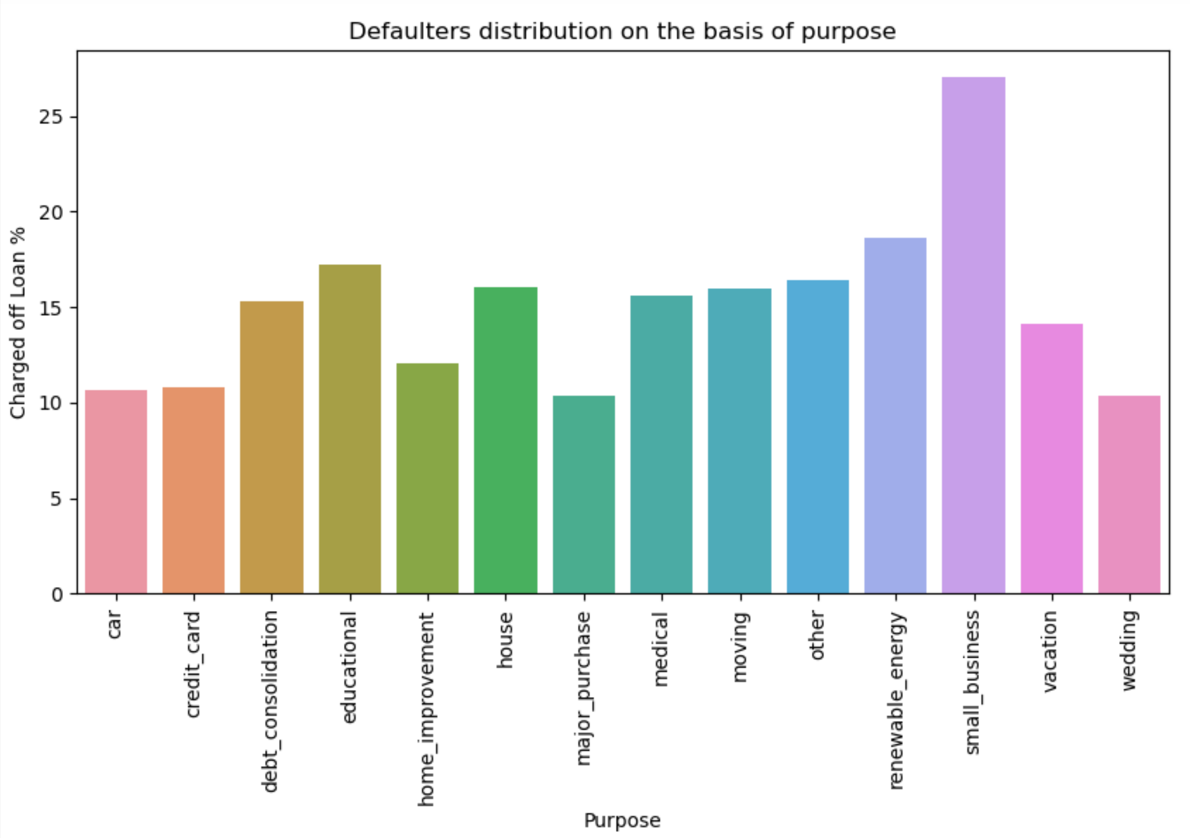


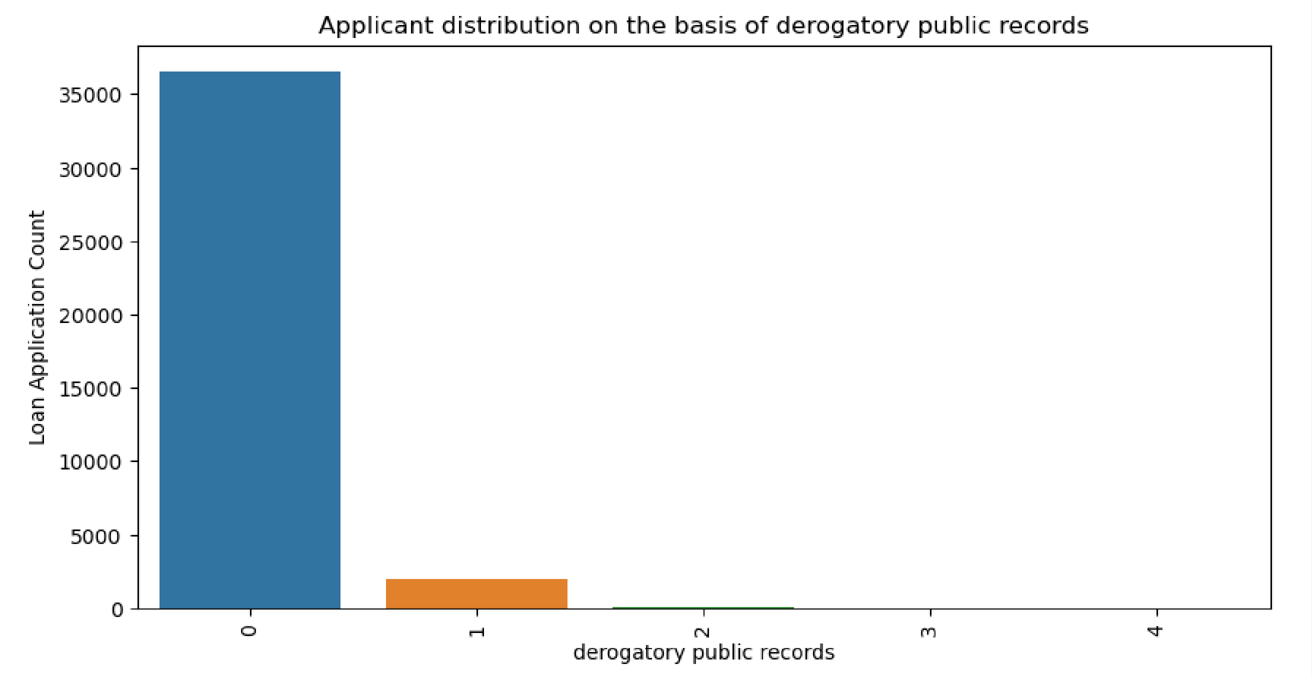
# Purpose



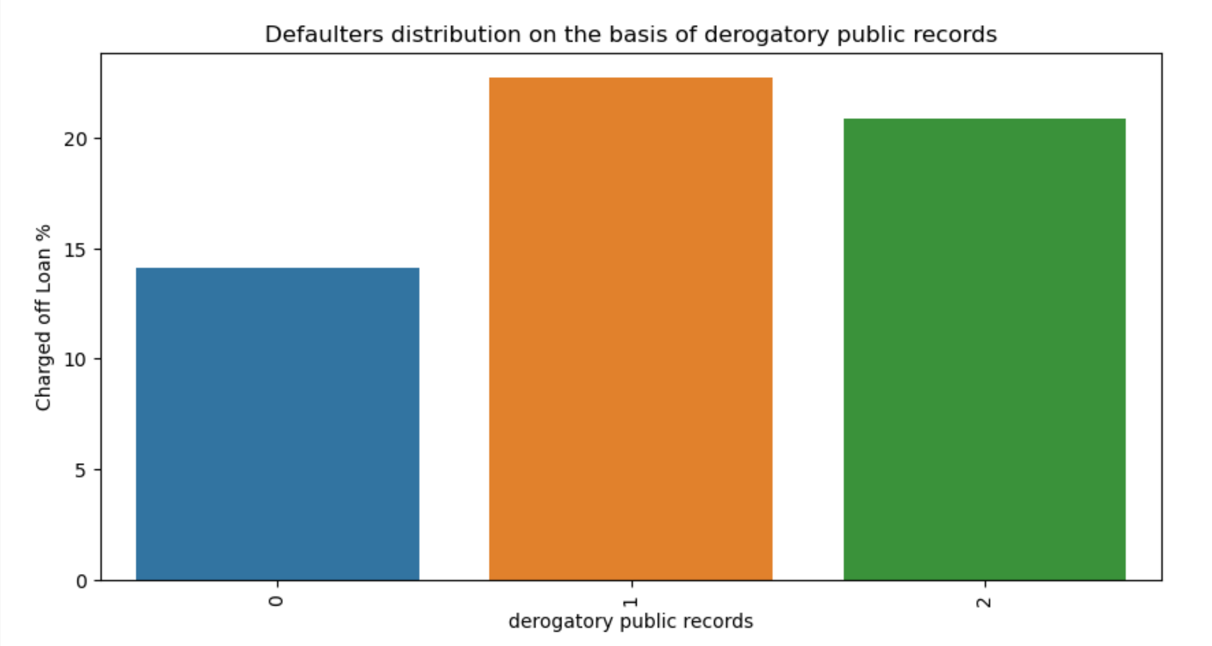

- Number of applicants for debt consolidation is the highest and significantly higher than the next highest credit card
- Number of defaulters is significantly higher for small business (27%) even if it is compared with next highest renewal energy (18%)



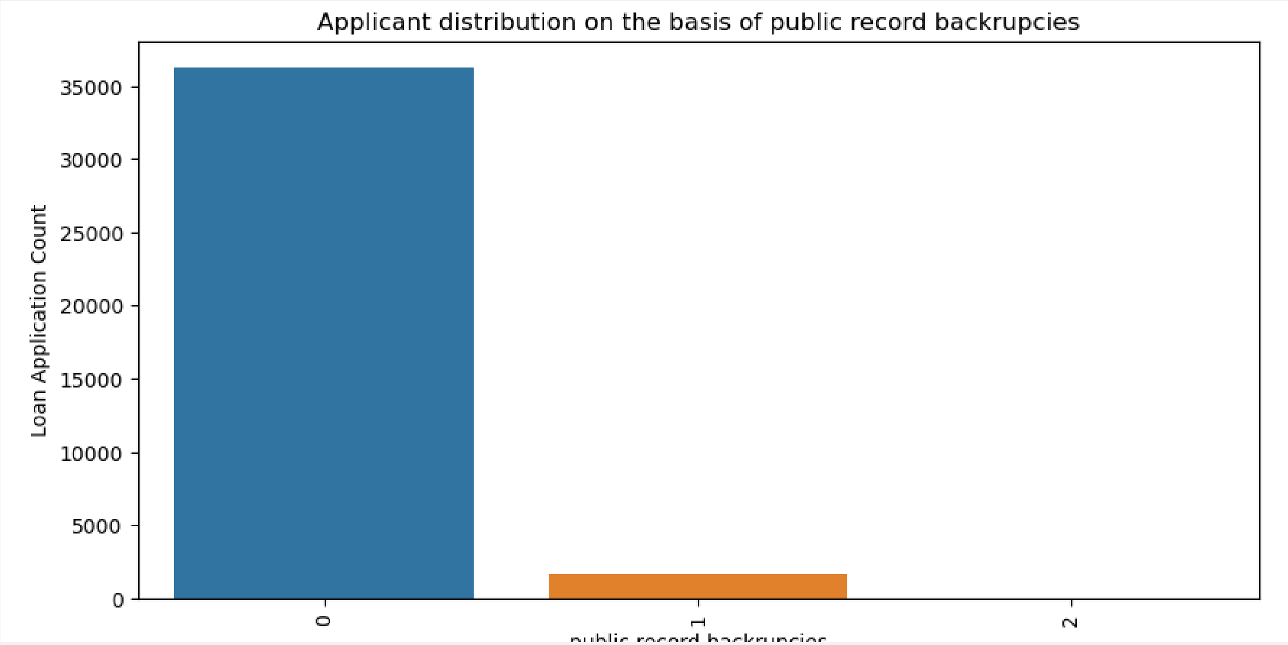
# Derogatory public records



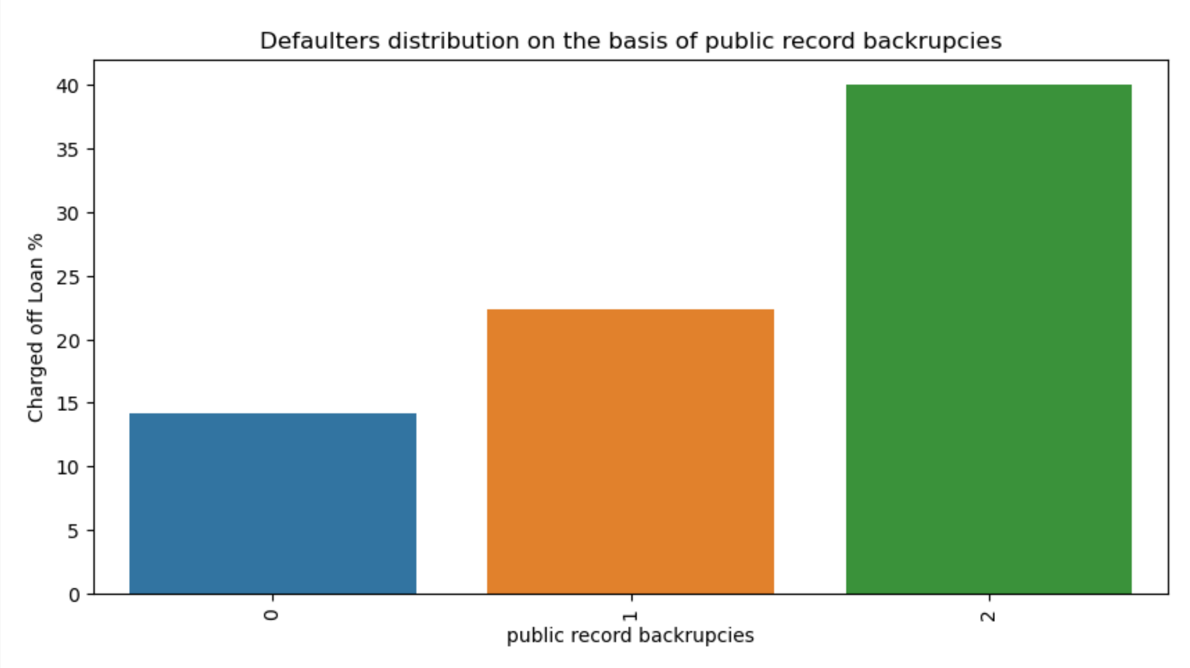

Chance of defaulting is higher with the borrowers having derogatory public records than who don't have



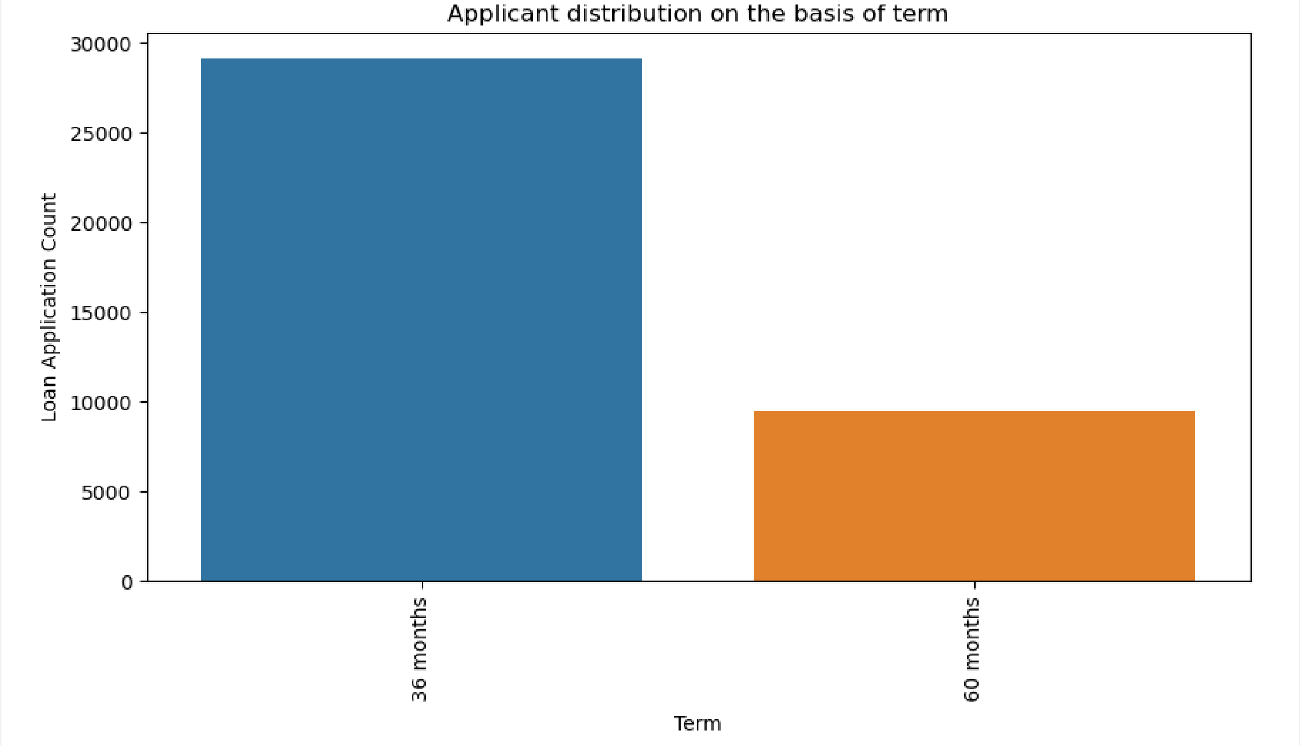
# Public record bankruptcies



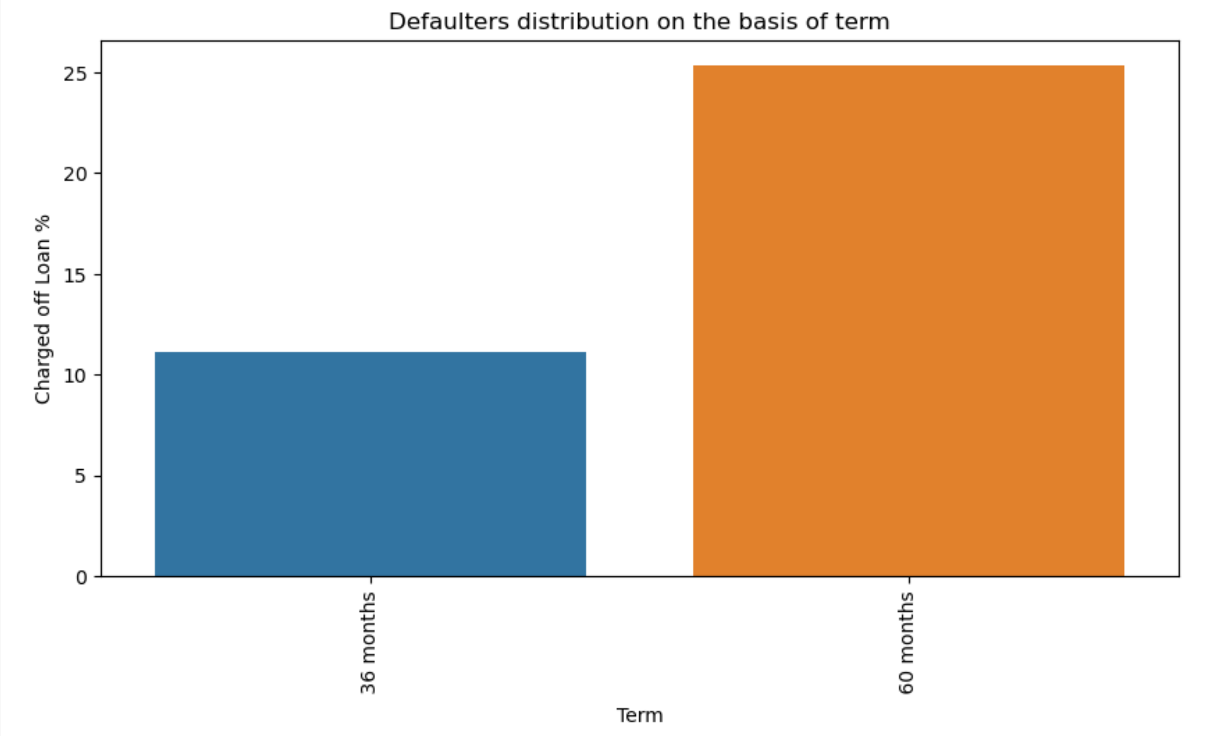

With increase of public record bankruptcies the number of defaulters increases



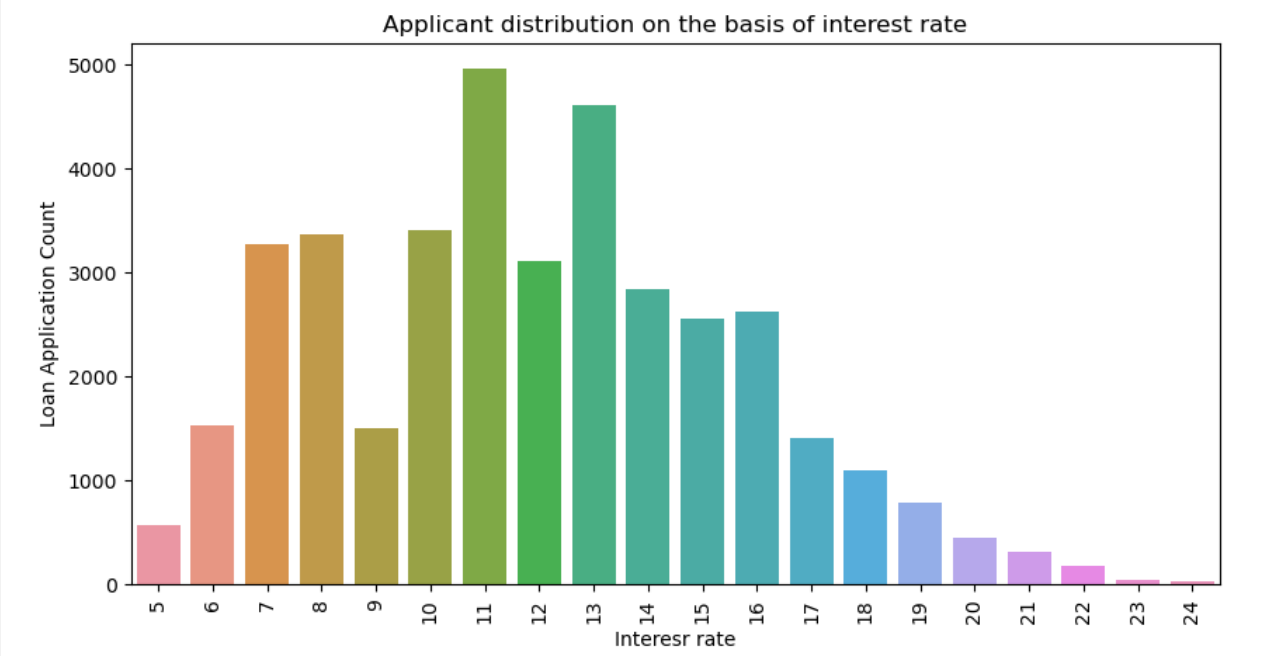
# Loan terms



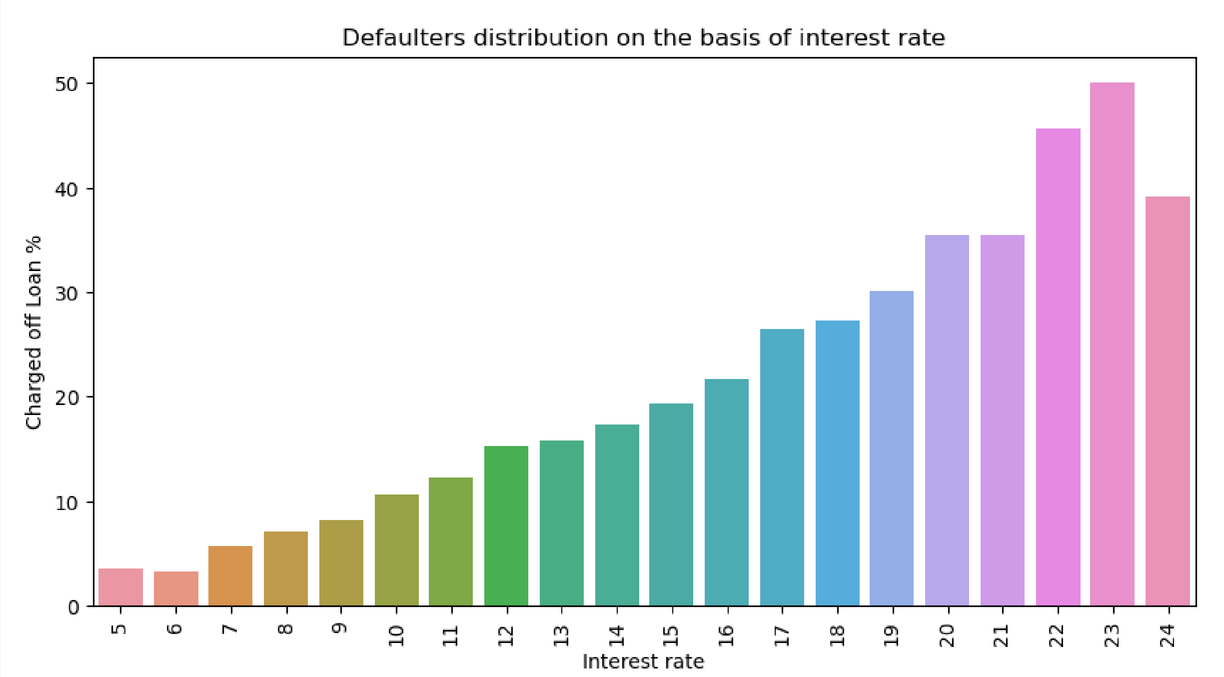

Loans with terms of 60 months attracts more risk of defaulting



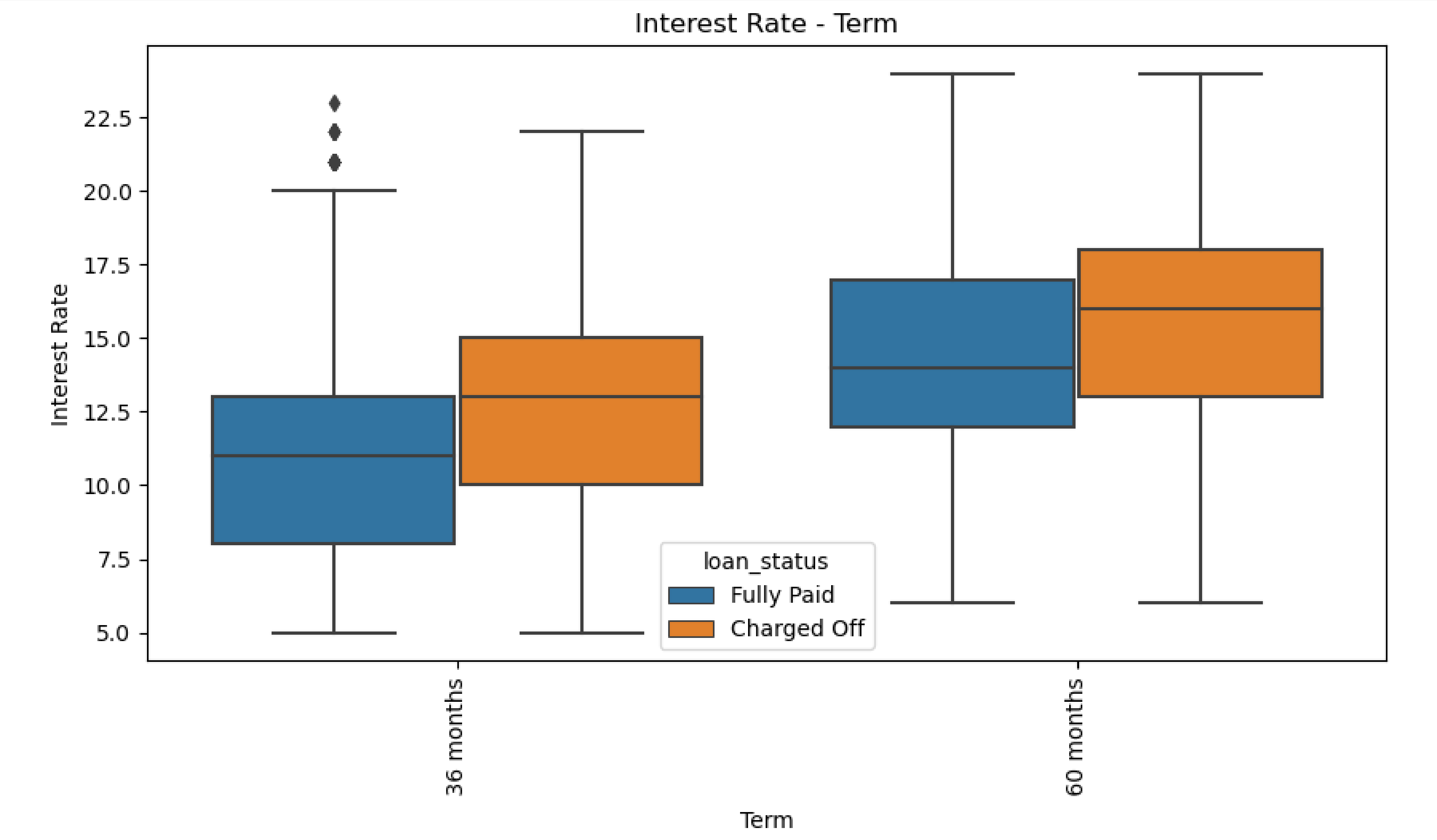
# Interest rate




With increase of interest rate, the risk of defaulting increases

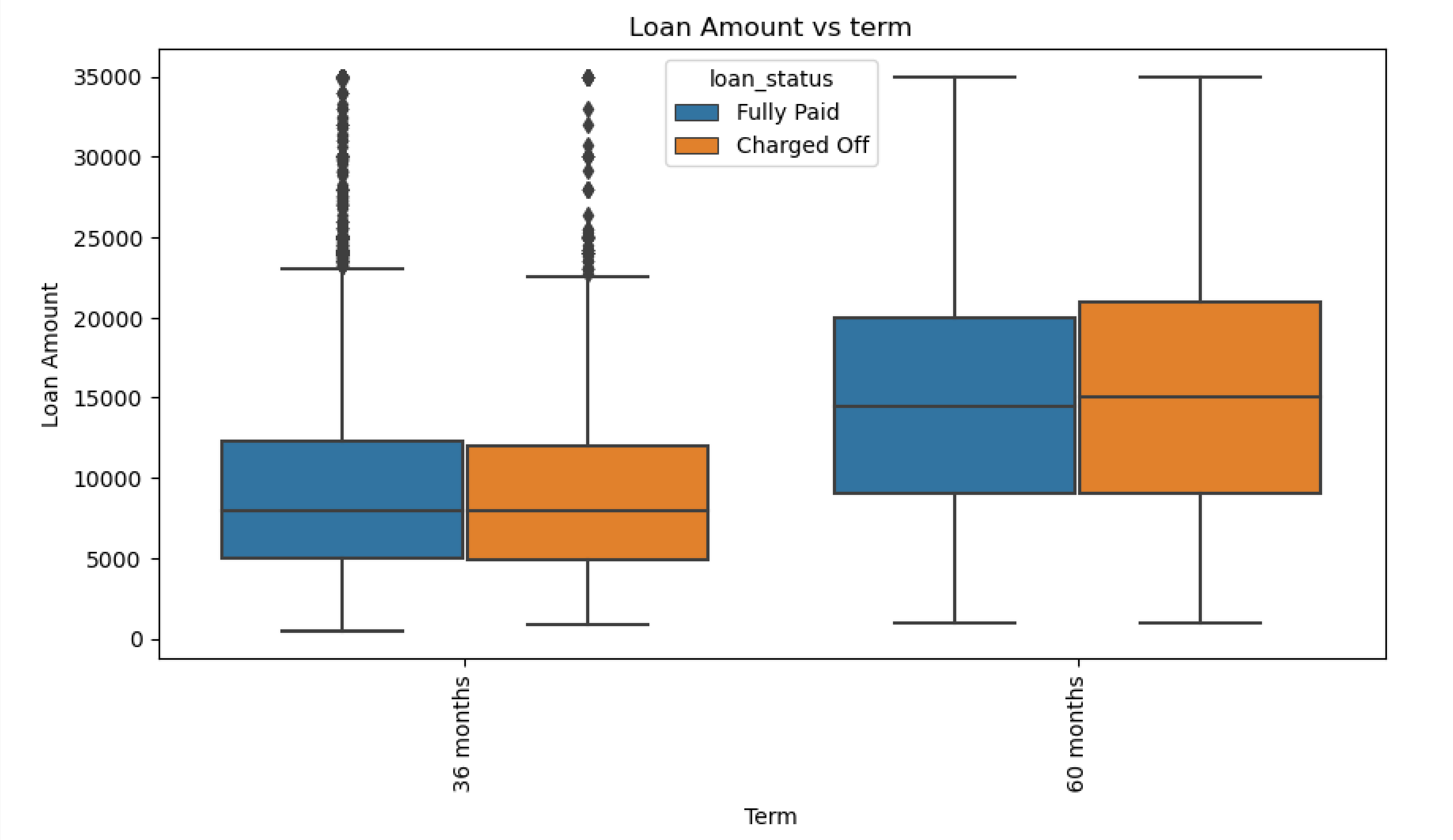


# Terms- Interest rate




**Analysis:**
•Interest rate increases with loan terms
•Irrespective of terms, risk of defaulting increase with increment of interest rate

# Terms- Interest rate




**Analysis:**

•Loan amount increases with loan terms

•A relation with risk of defaulting can't be determined for the same

# Conclusion

- Higher loan grade(G) will have more chances of charging out. Lesser risk grade loans(A) have less chances of charging out.

- "Small Business" loan purpose has higher chances of charging out.

- Higher interest rate of loan will have higher chances of charging out.

- Company should focus on giving loan for shorter term (36 months than 60 months).

- Company should not give loans to borrowers with derogatory public records.

- Company should not give loans to borrowers with bankruptcy records.

- Company should not give loans to borrowers with more than 2 inquiries in last 6 months.

- Higher income groups have less chances of charging out.