

The background is a light teal color. In the upper left, there are several 3D cubes of varying sizes, some connected by thin white lines. On the right side, there is a complex network diagram consisting of many small white dots connected by thin white lines, forming a web-like structure. A large black rectangular box is positioned in the lower left, containing the title and author's name.

Lending Club Case Study

ARIJEET SAHA

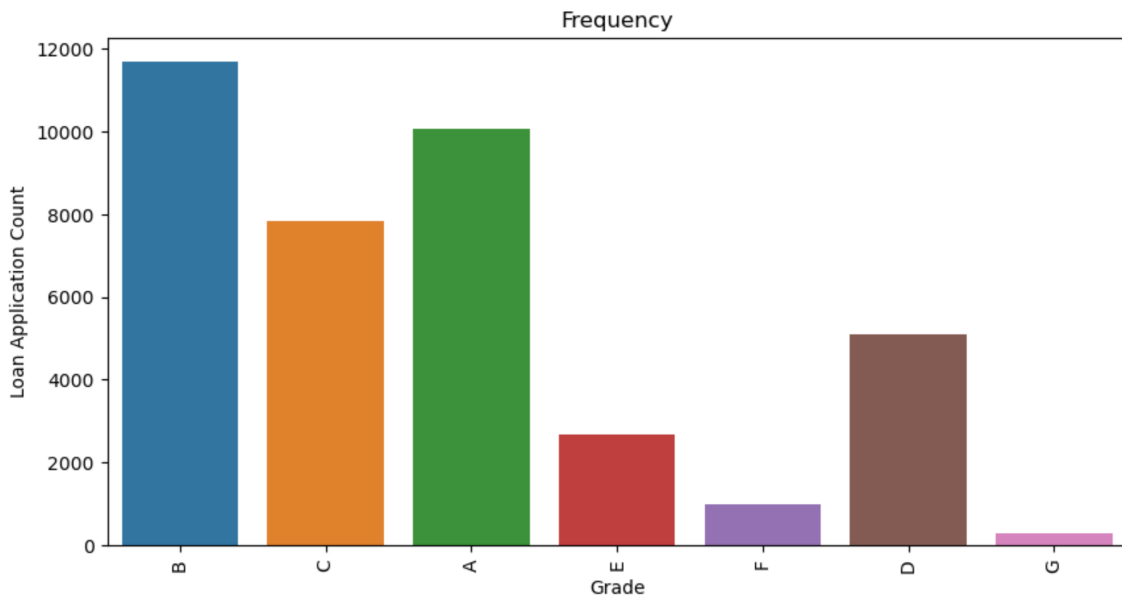
Problem statement

1. Company is largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures.
2. Company wants to identify driving factors behind a loan default, so that such loans can be reduced thereby reducing the credit loss of the company.

Approach

Data Analysis



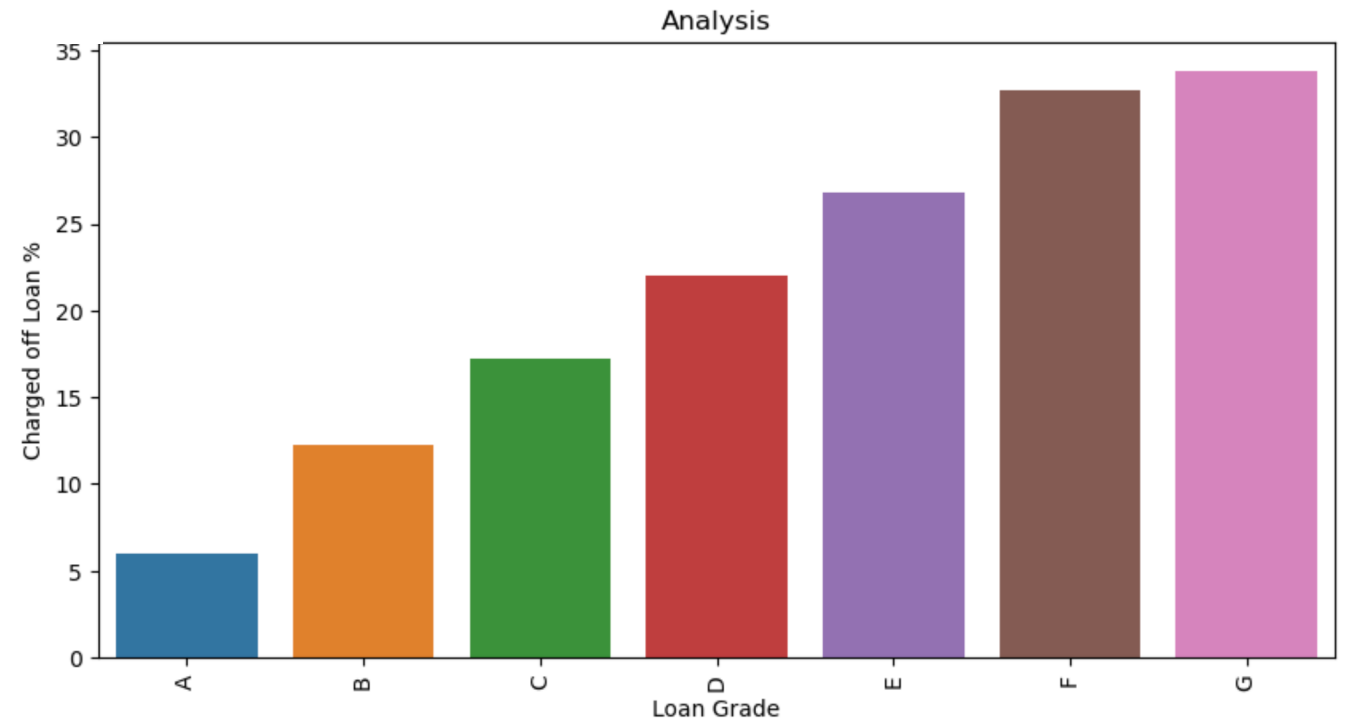


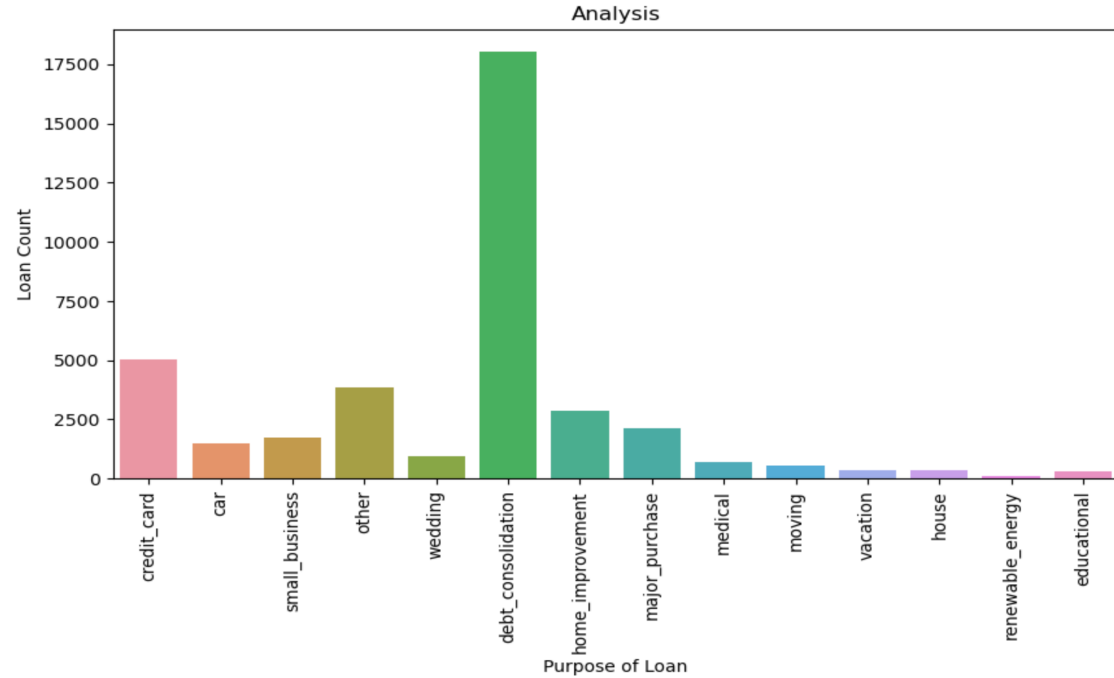
Grade

- Loan grades are set based on both the borrower's credit profile and the nature of the contract. 'A' grade loans represent the lowest risk while 'G' grade loans are the riskiest.
- Grade -> LC assigned loan grade
- Sub grade -> LC assigned loan subgrade

Analysis

- On overall grade analysis, the charged off loan percent is highest for grade G(highest riskier) and least in grade A(lowest risk).
- The trend of charged off loan % against grade is an increasing order from grade A(lowest risk) to grade G(highest risk).



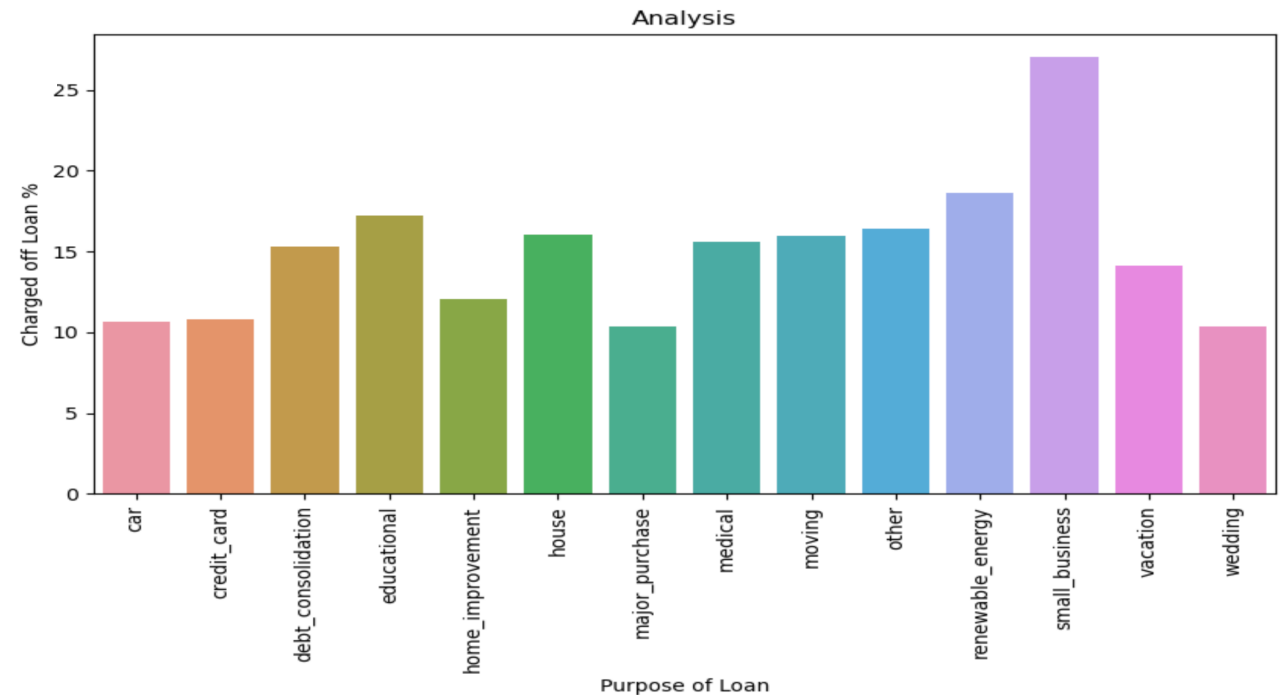


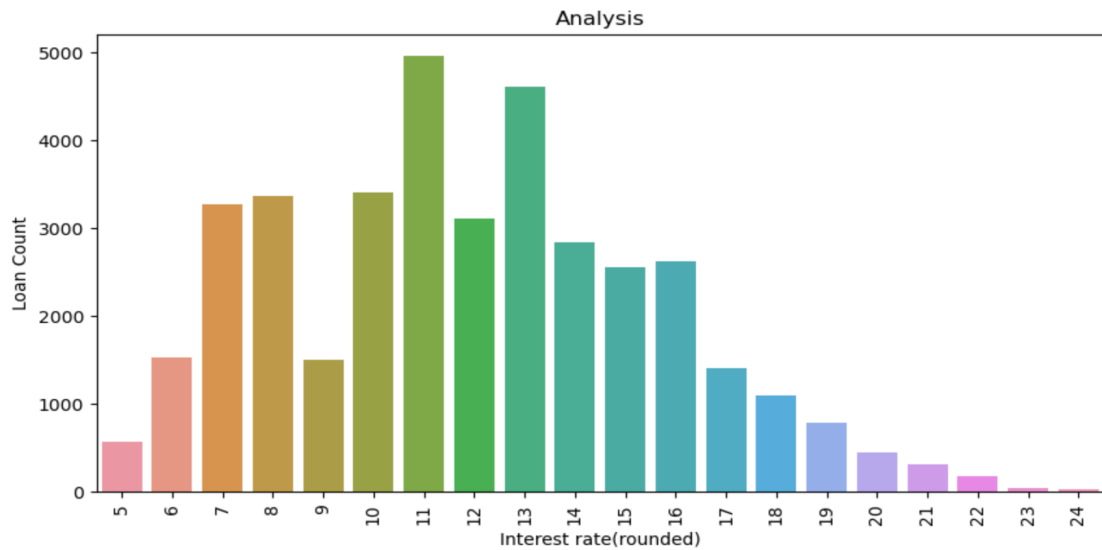
Analysis

- Maximum loans are under "Debt Consolidation" Category.
- The charged off loans % is maximum for "Small Business" purpose.

Purpose of the Loan

- A purpose category provided by the borrower for the loan request.



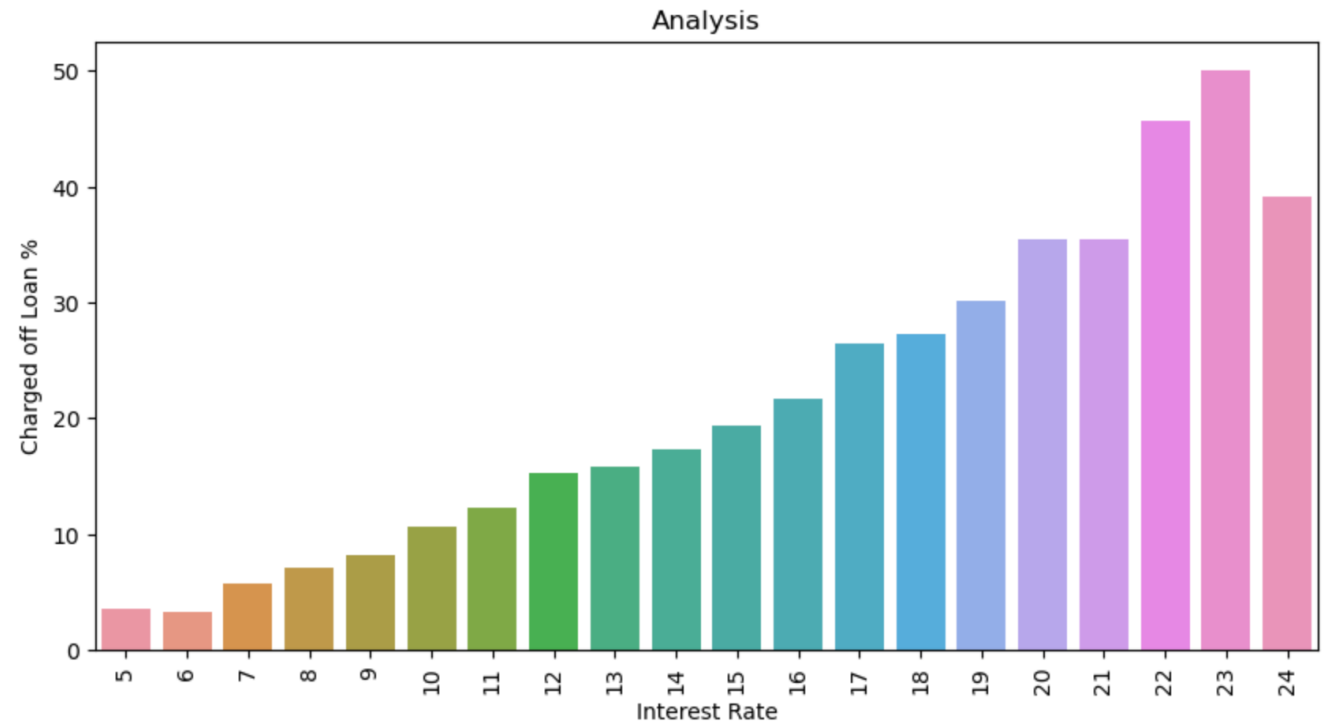


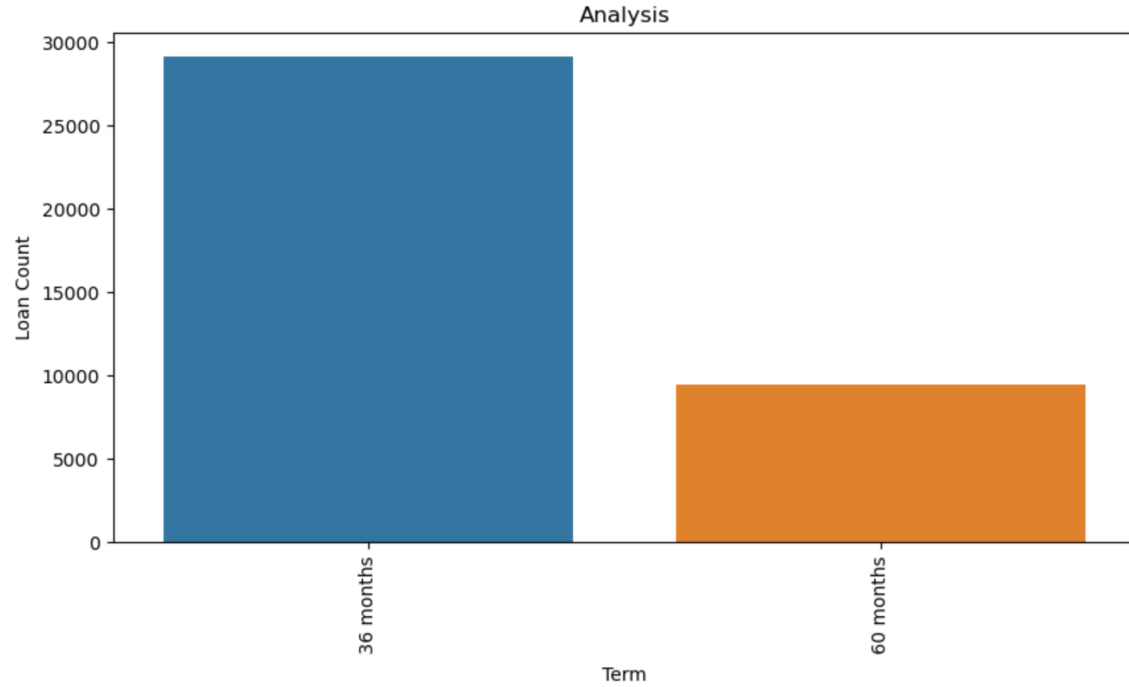
Interest Rate

The interest rate the loan.

Analysis

- With increase in "interest rate", the chances of loan becoming "Charged off" increases.



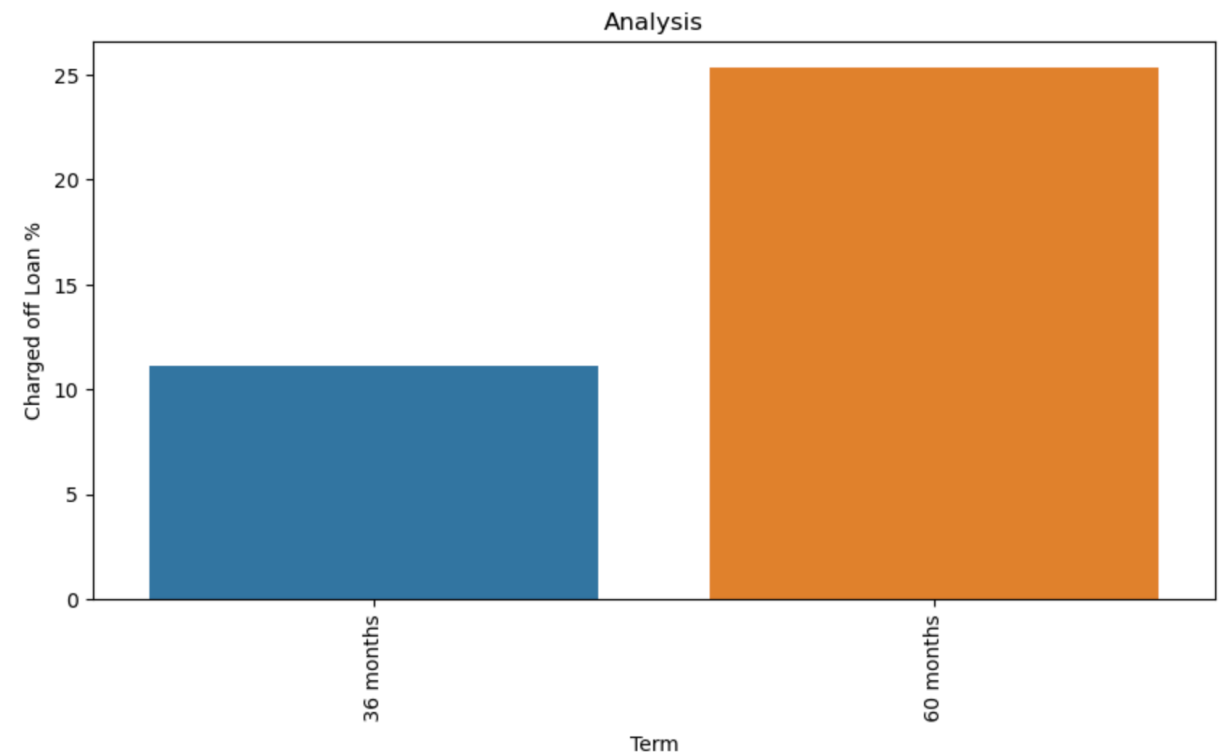


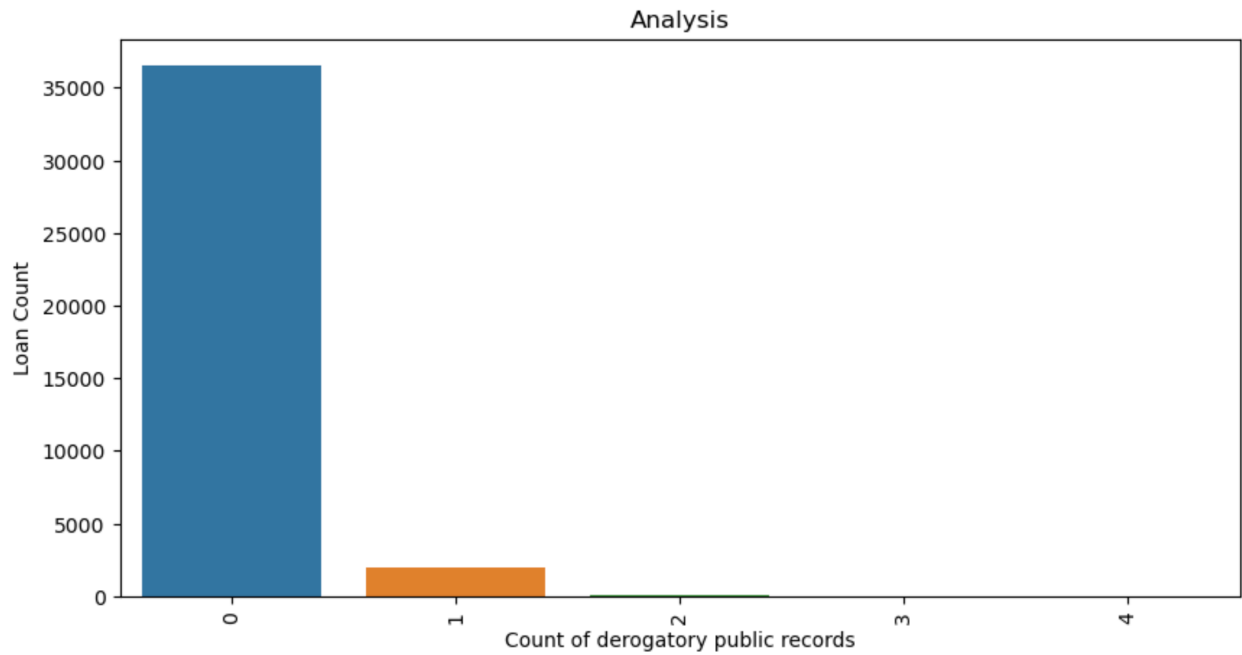
Analysis

- Count of loans with term of 36 months are almost thrice than of loans with term 60 months.
- Loans with term of 60 months have more chances of becoming "Charged off" compared to 36 months term loans.

Term of the Loan

The number of payments on the loan. Values are in months and can be either 36 or 60.



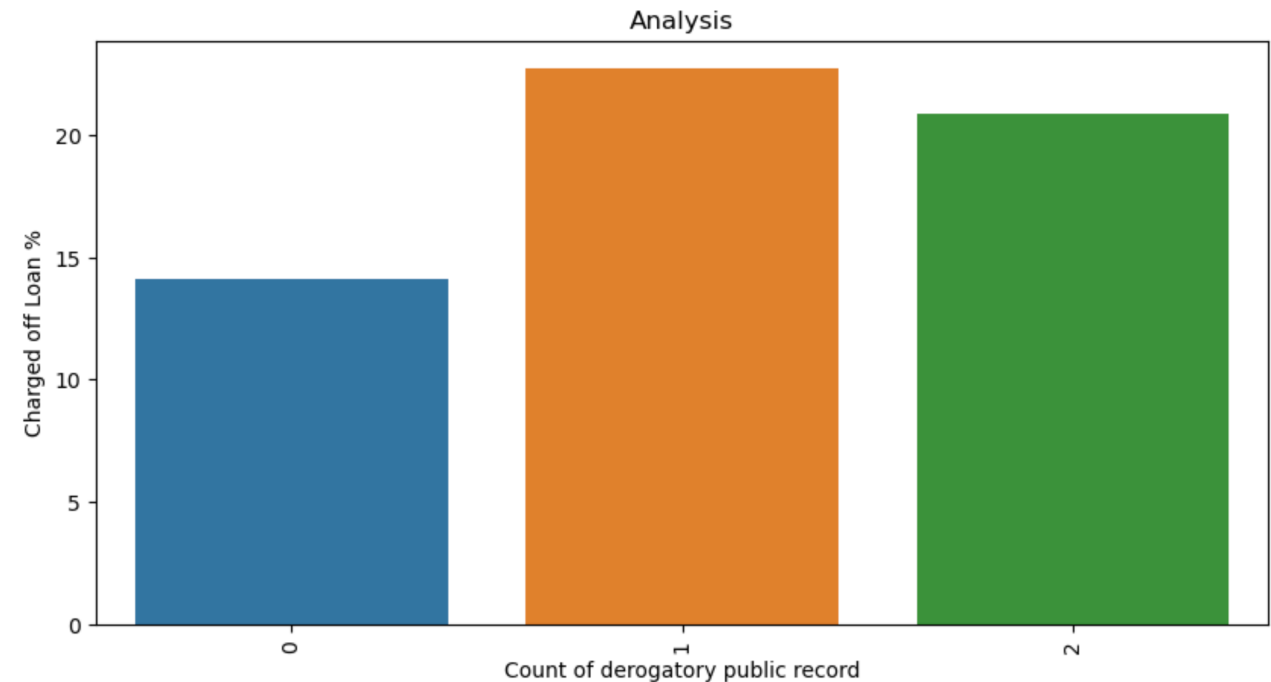


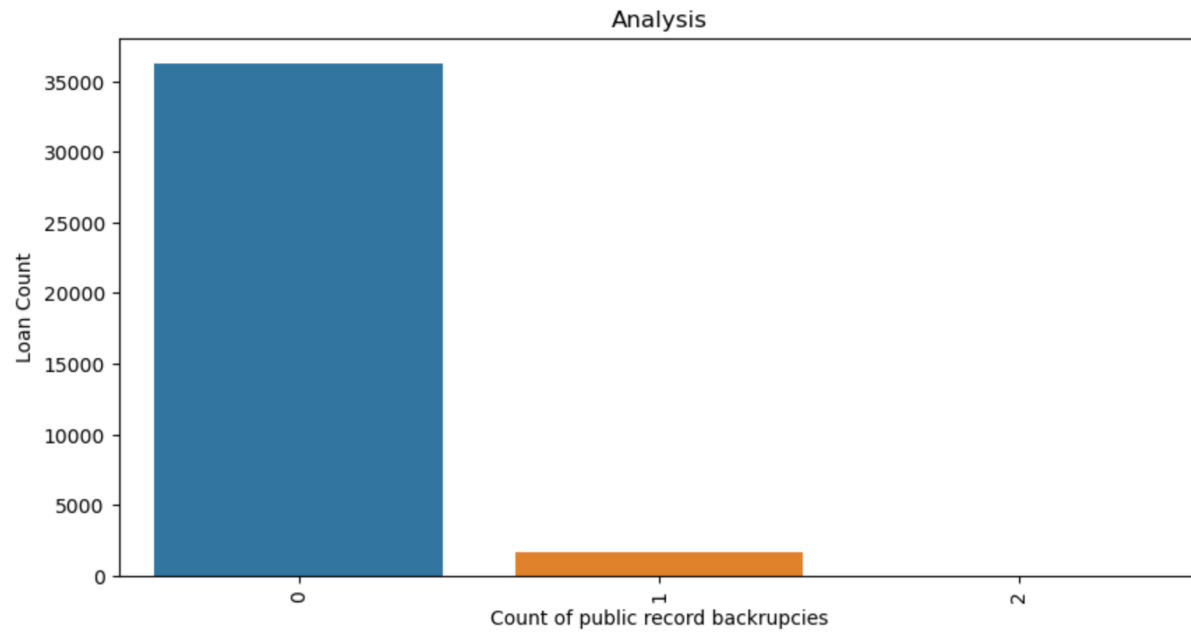
Derogatory Public records

Derogatory public records are those that contain negative information such as bankruptcies and liens.

Analysis

- Lesser Loan accounts are created for increase in the derogatory public records number.
- Charged off % increases with increase in count of derogatory records.



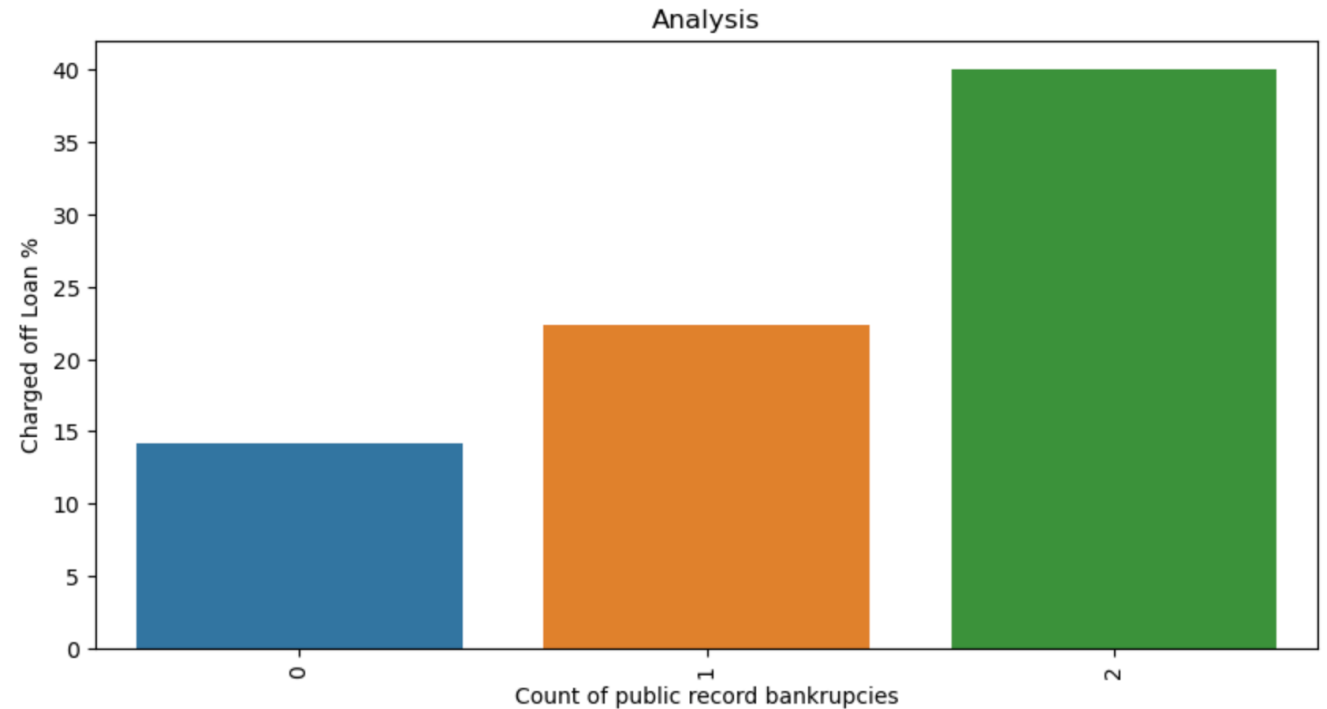


Public record bankruptcies

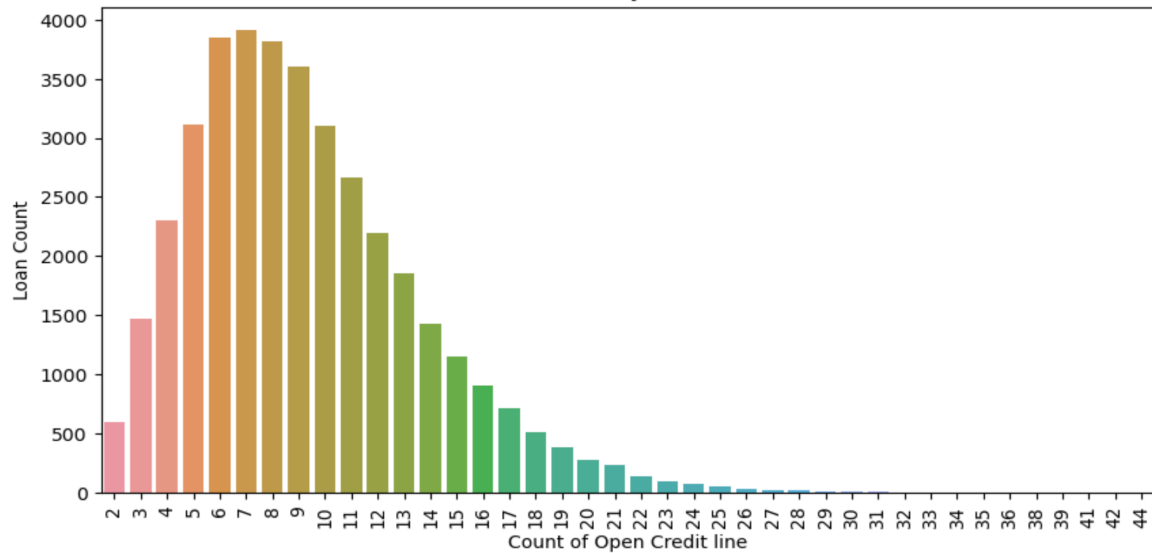
Count of public record bankruptcies.

Analysis

- Loans offered to borrowers with record of public bankruptcies are lot less compared to those who don't have public bankruptcies.
- With the increase in count of public record bankruptcies, the Charged off loan % increases.



Analysis



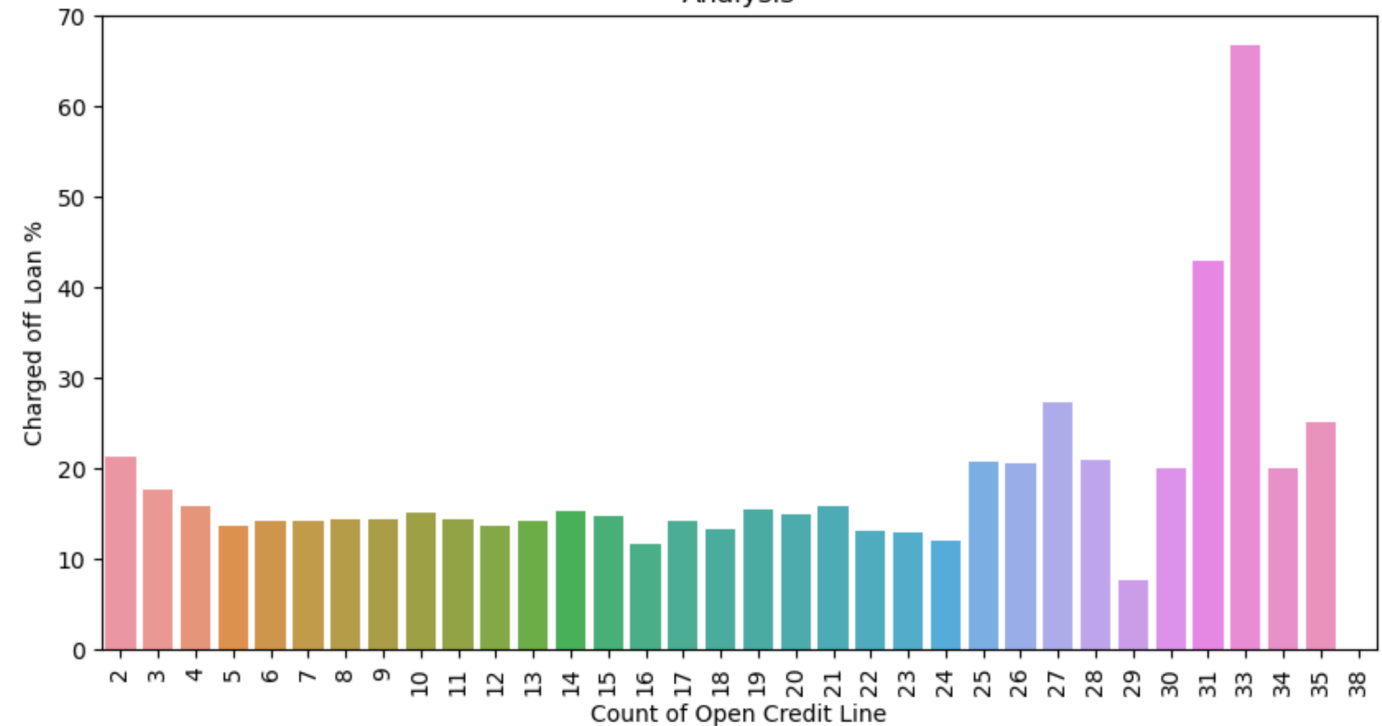
Open Credit Lines

- An open credit is a financial arrangement between a lender and a borrower that allows the latter to access credit repeatedly up to a specific maximum limit.
- The count of total open credit lines in the borrower's credit file.

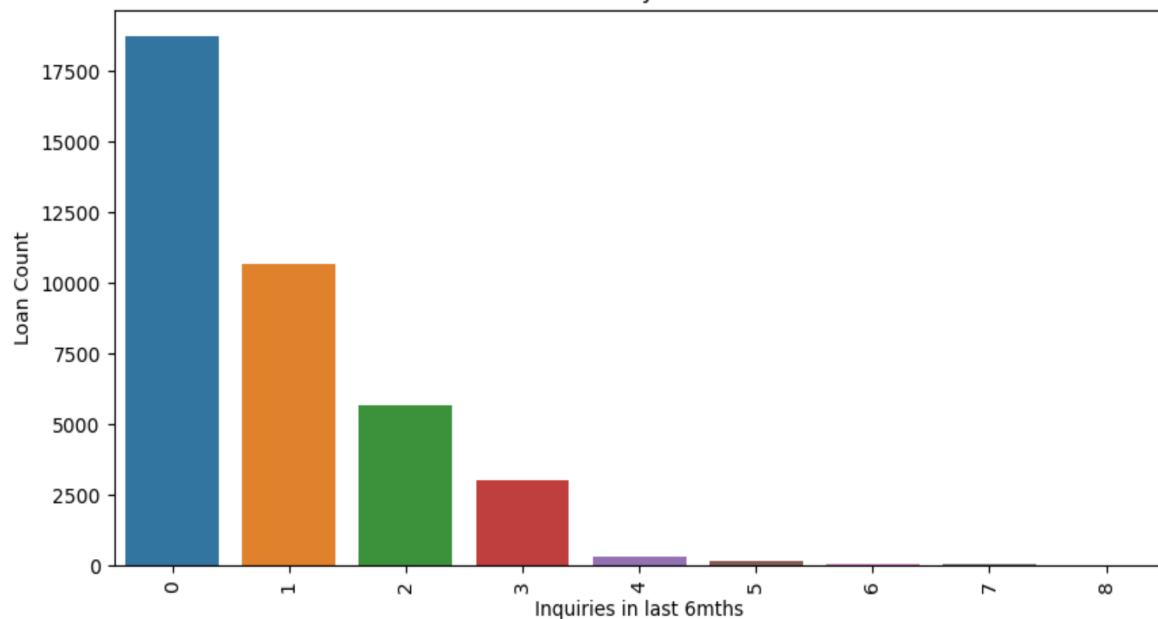
Analysis

- Fewer loans are given as number of open credit lines increases.
- With increase in number of open credit lines for borrower there is an impact on the loan status turning "Charged Off".

Analysis



Analysis



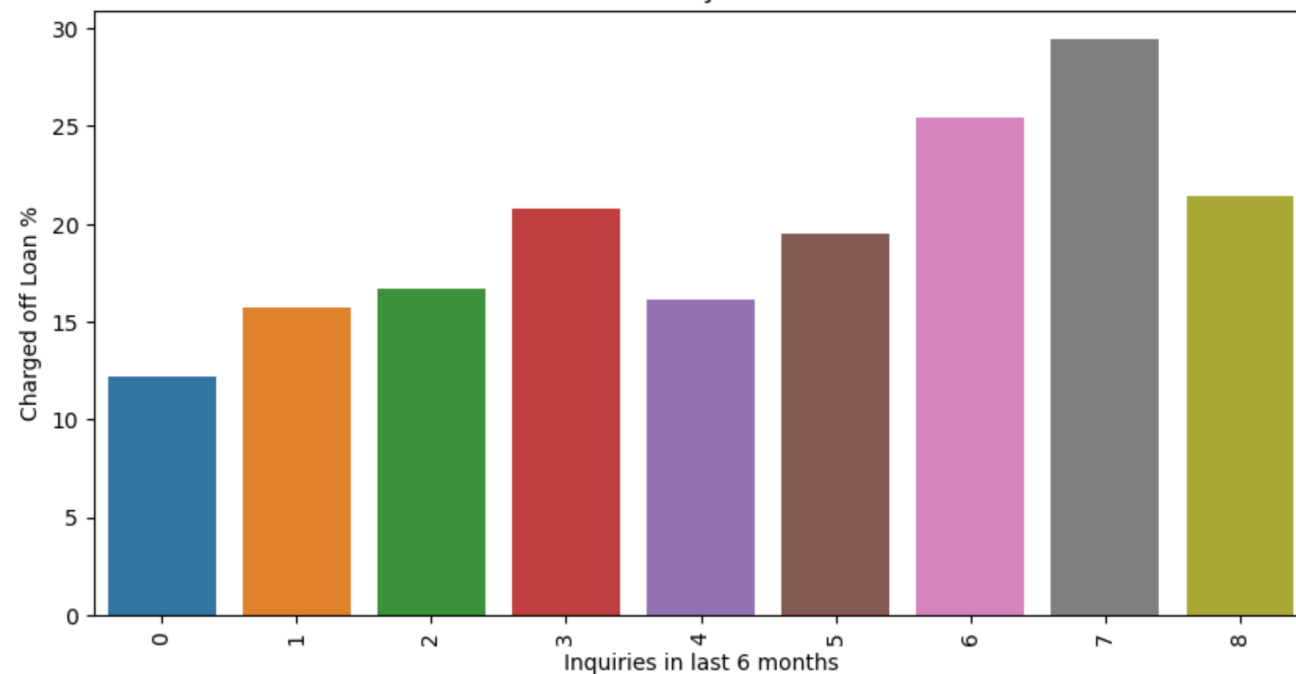
Analysis

- Lesser number of loans are given for more number of credit inquiries in the last 6 month.
- Loan accounts with higher inquiries in last 6months has higher chances to being Charged Off.

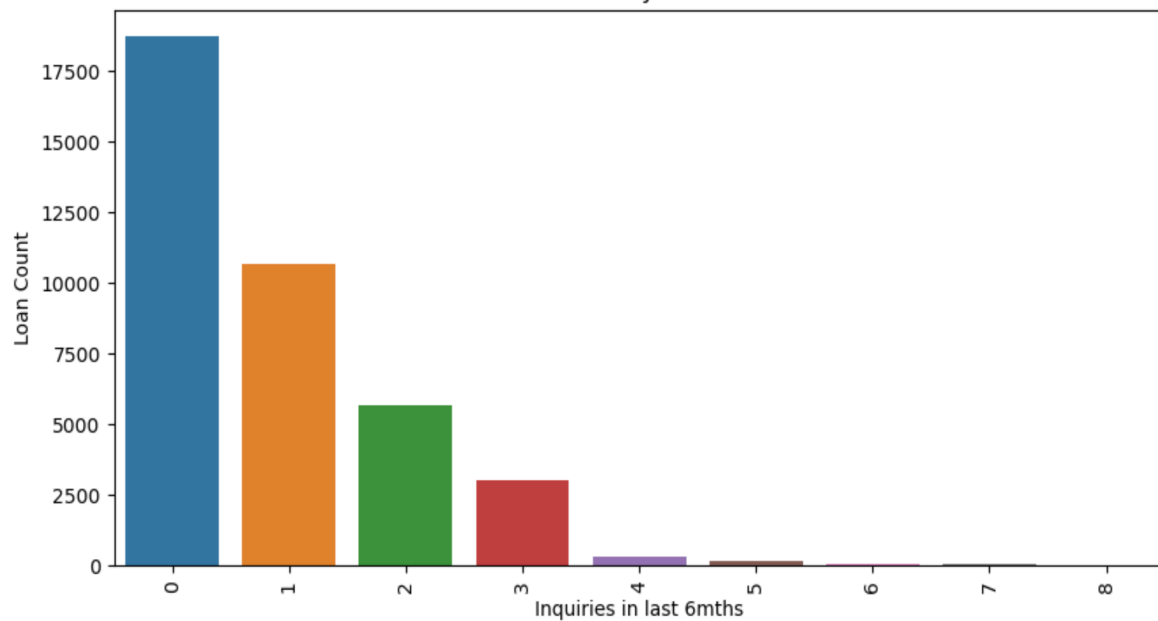
Inquiries in last 6 months

- The number of credit inquiries in past 6 months (excluding auto and mortgage inquiries)
- A credit inquiry is when a creditor checks credit score.
- Hard inquiries can negatively affect your credit score while a soft inquiry will have no effect.

Analysis



Analysis



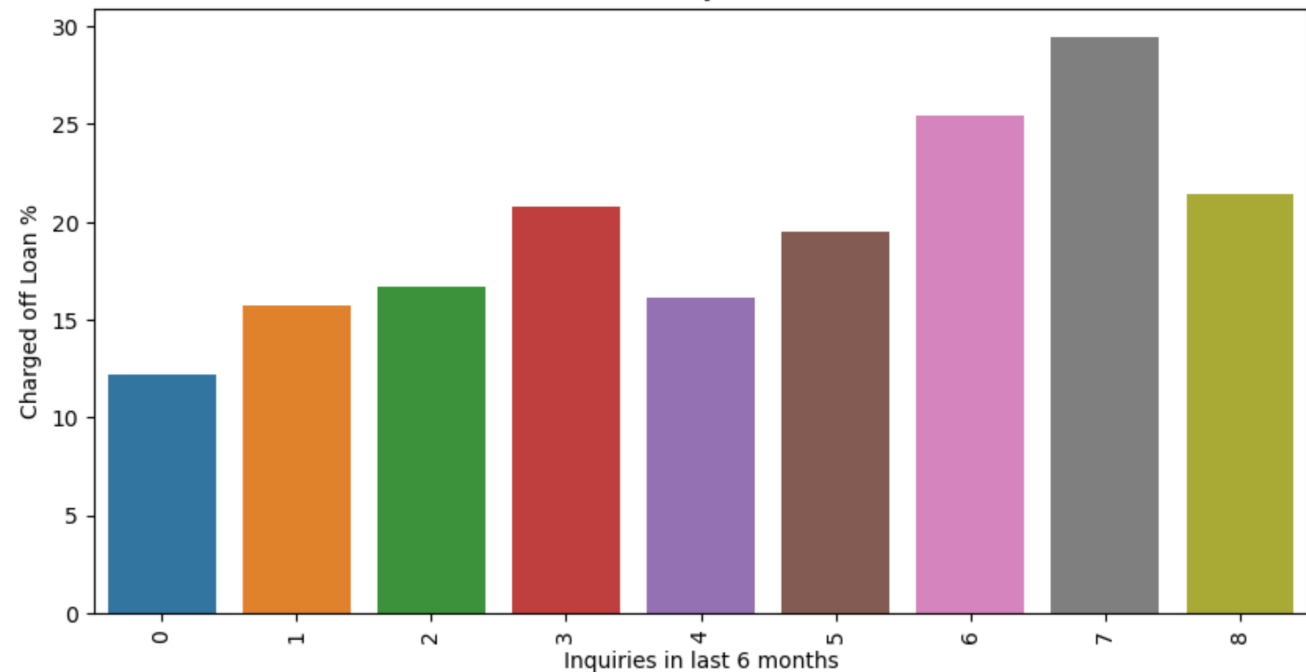
Analysis

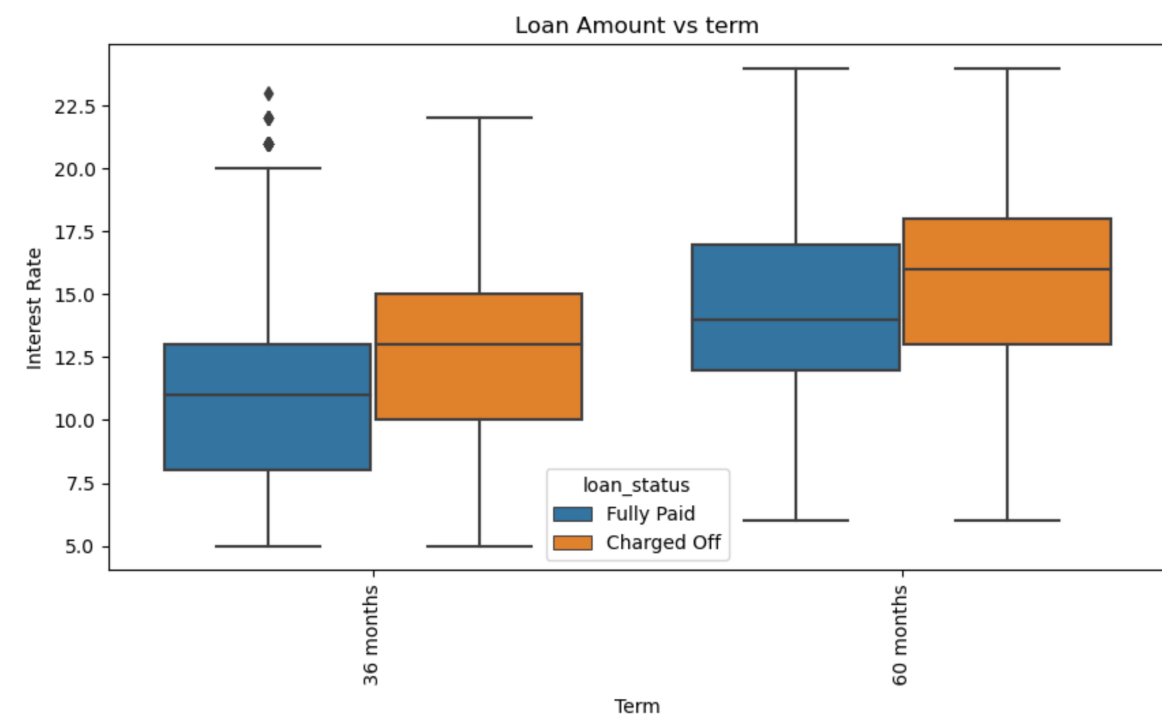
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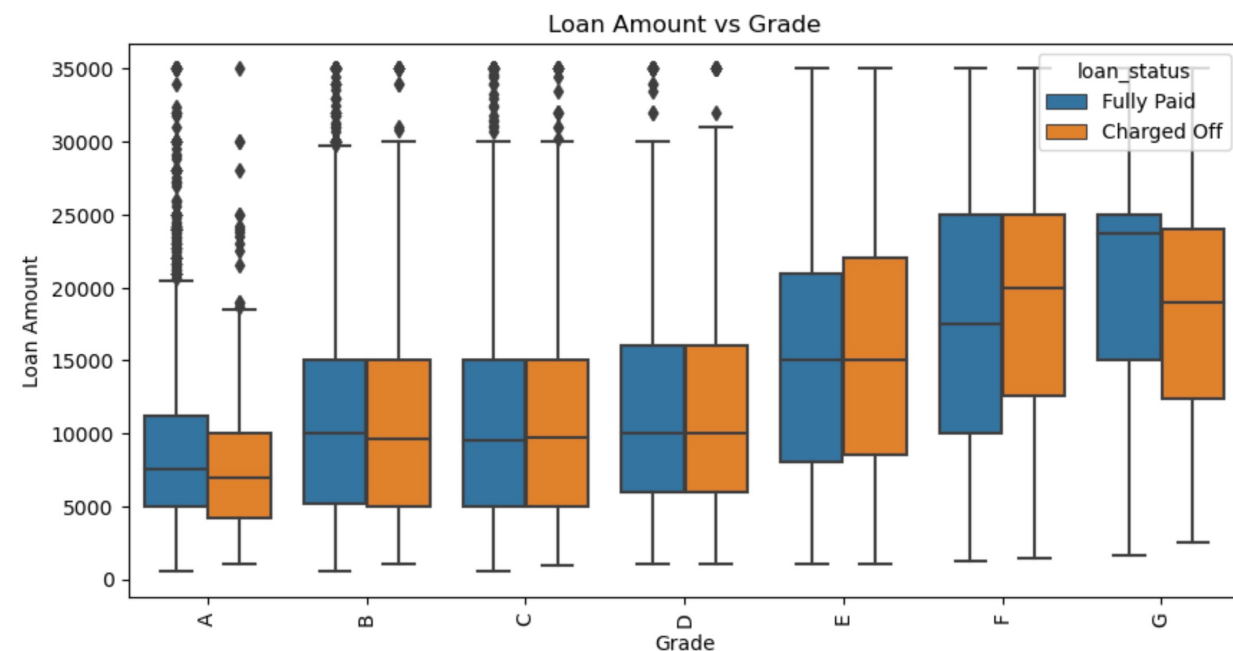
Analysis





Analysis

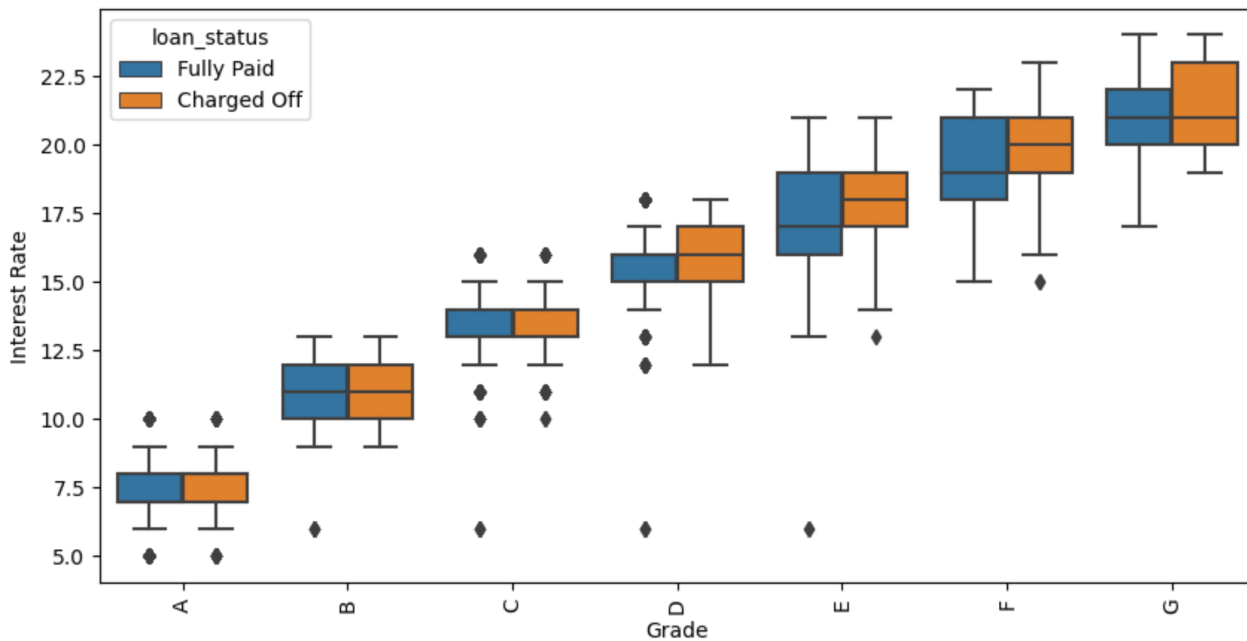
- With increase in term of loan, the interest rate increases.
- For loans of all terms, with increase in interest rate the loan account chances of turning "Charged Off" increases.



Analysis

- With the loan risk grade increase, the loan amount increases.

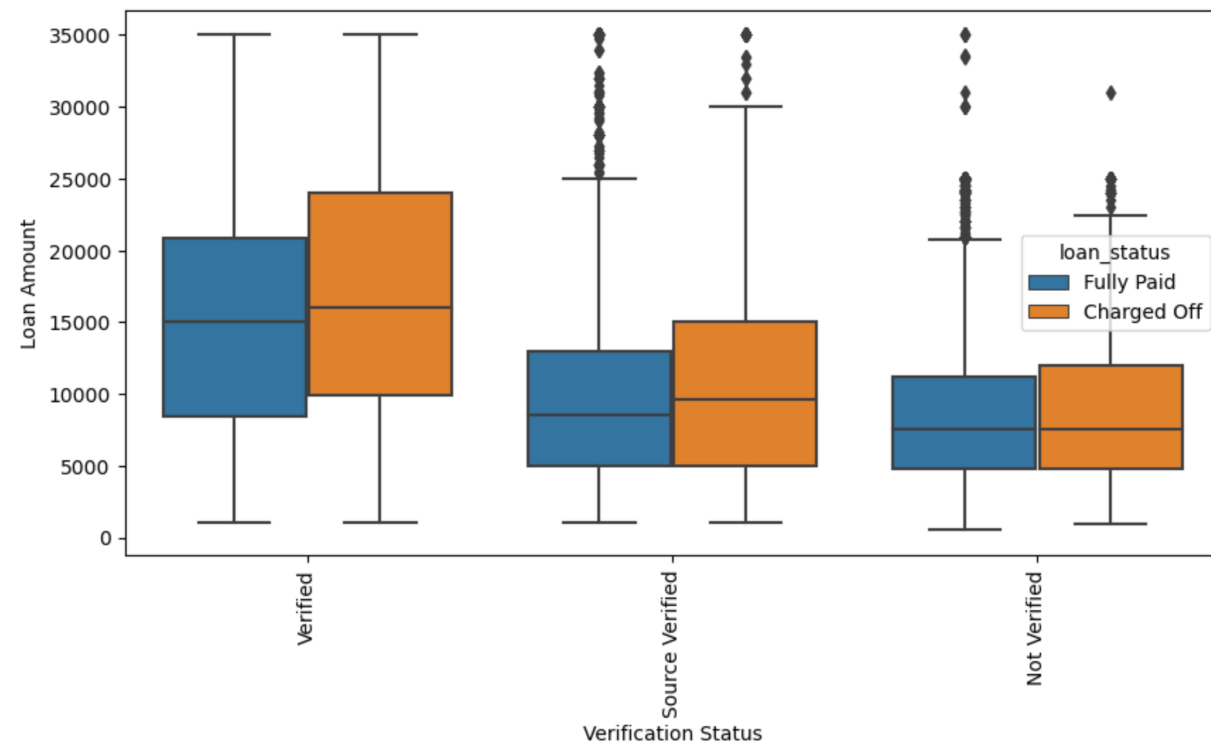
Interest Rate vs Grade



Analysis

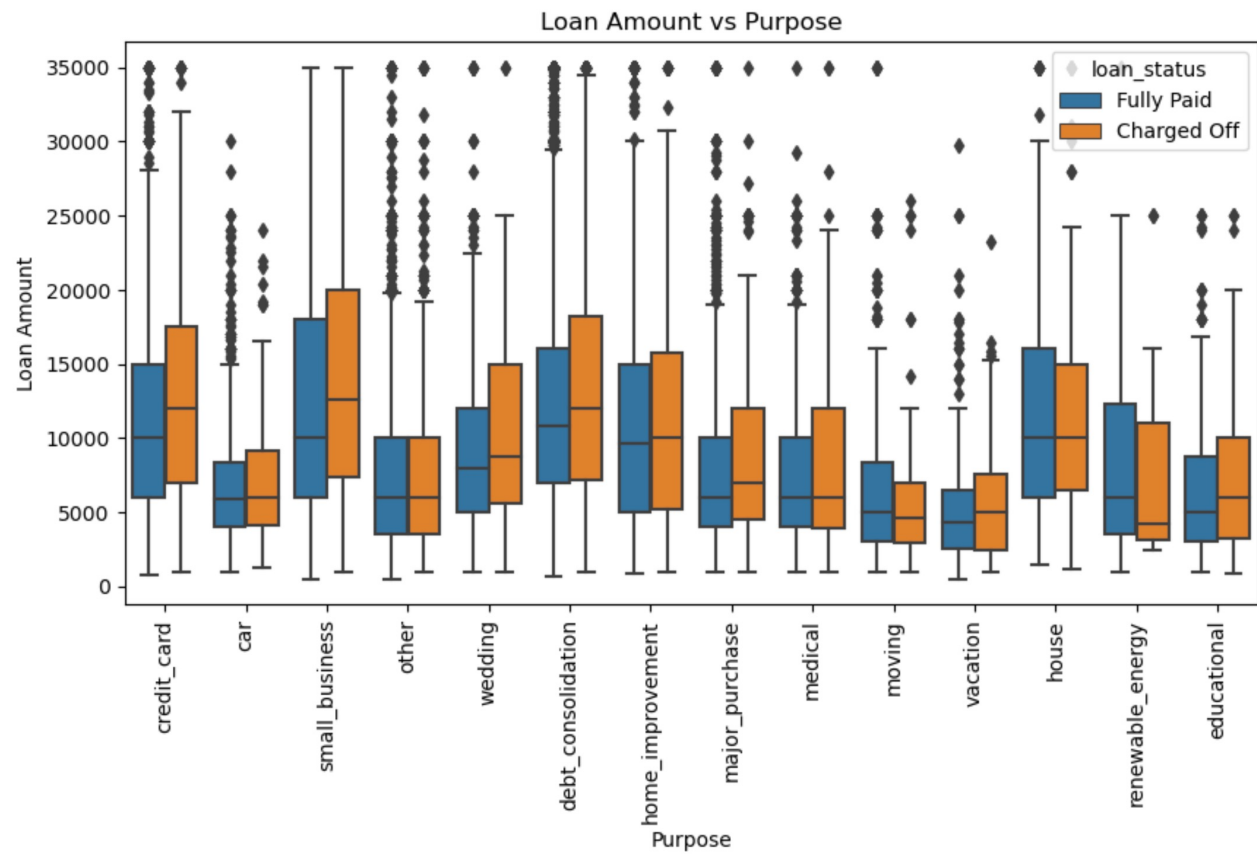
- As risk grade increases, the interest rate increases.

Loan Amount vs Verification Status



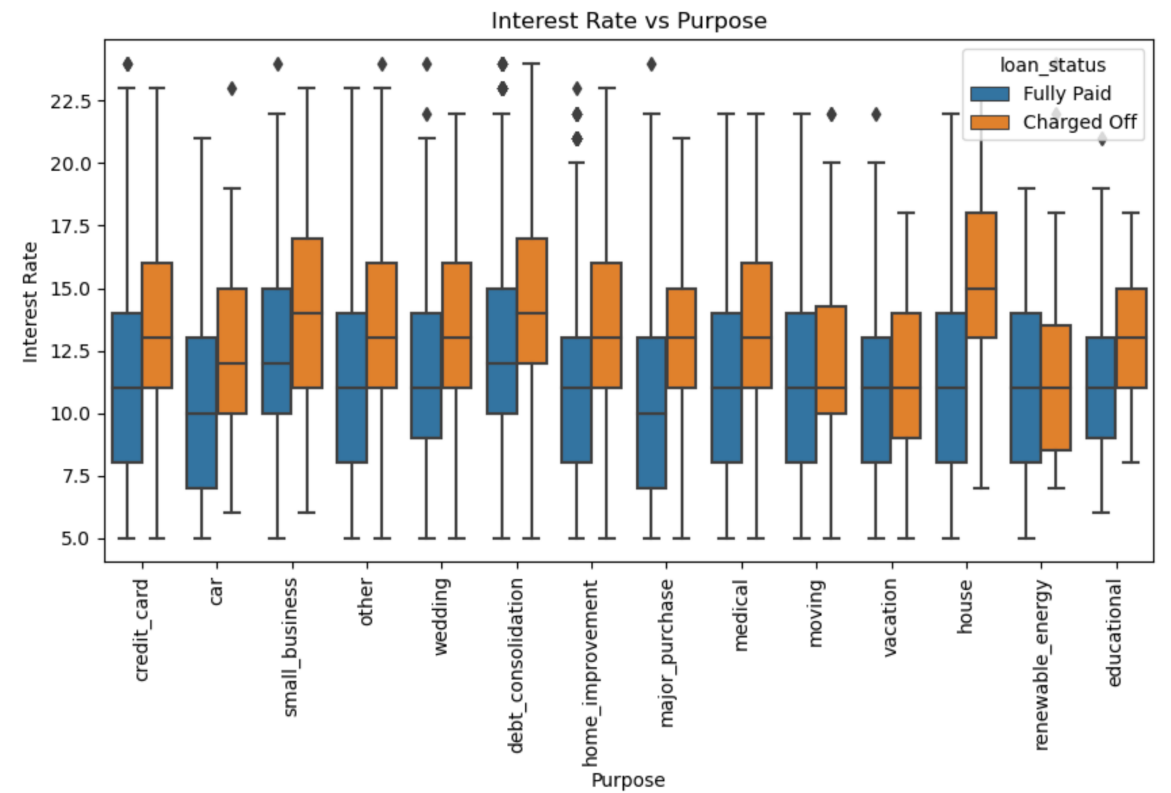
Analysis

- Loan amount is highest for verified loan accounts.
- Loan amount is higher for 'Source Verified' loan accounts compared to 'Not Verified'.



Analysis

- Loan amount is higher for 'small_business'.



Analysis

- "Home Loans" with higher interest rate turn into "Charged Off" accounts.
- In general with increase of interest rate, the loans turning "Charged Off" increases.

Loan Recommendation

1. Higher loan grade(G) will have more chances of charging out. Lesser risk grade loans(A) have less chances of charging out.
2. "Small Business" loan purpose has higher chances of charging out.
3. Higher interest rate of loan will have higher chances of charging out.
4. Company should focus on giving loan for shorter term (36 months than 60 months).
5. Company should not give loans to borrowers with derogatory public records.
6. Company should not give loans to borrowers with bankruptcy records.
7. Company should not give loans to borrowers with more than 24 open credit lines.
8. Company should not give loans to borrowers with more than 2 inquiries in last 6 months.
9. Home Loans with higher interest should not be given.