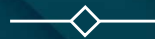# LENDING CLUB CASE STUDY ANALYSIS

Bhavya Kapoor and Balkrishnan Venkiteswaran

LOAN COUNT   VS   LOAN GRADE

OBSERVATION:

Loan Grade 'B' seems to be the most popular category, where maximum number of loans are disbursed.
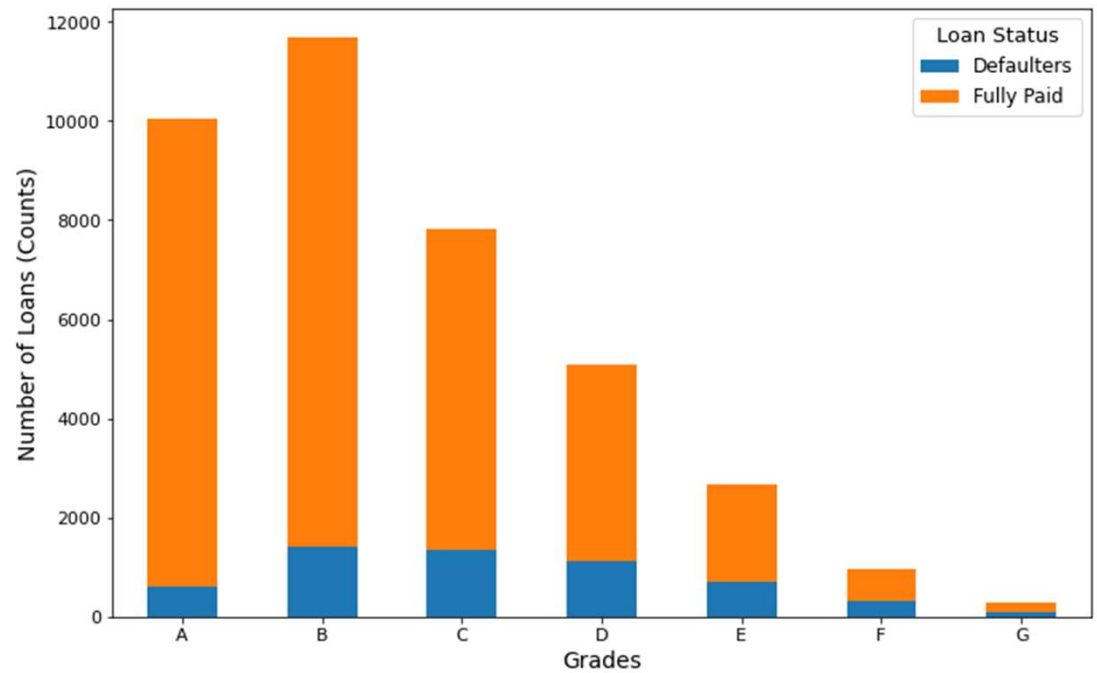This is the category where most loans are FULLY-PAID back.

DEFAULTERS seem to be associated with both Grade 'B' and 'C' category of loans.

PROPOSAL:

LC management must review their policies on why Grade 'B' and 'C' loans are mostly defaulted.

Distribution of Loan Grades for Defaulters and Fully Paid

LOAN COUNT   VS   LOAN SUB-GRADE
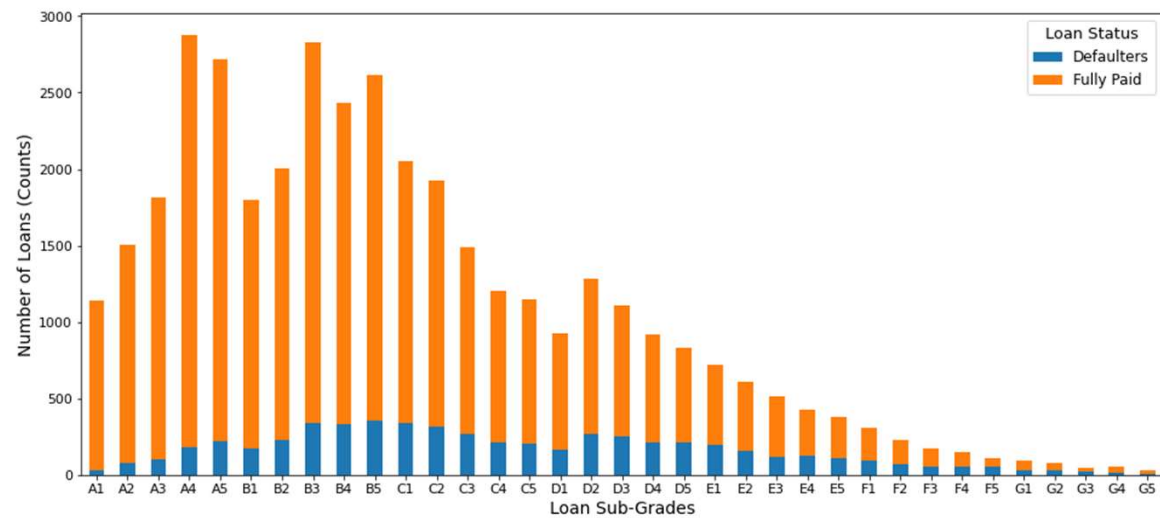
OBSERVATION:

Loan Sub-Grades 'B3', 'B4' and 'B5' seems to be the most popular sub-category, where maximum number of loans get DEFAULTED.

PROPOSAL :

LC management must review their policies on why these 3 sub-grade loans are mostly defaulted.

Distribution of Loan Sub-Grades: Defaulters vs. Fully Paid

INSTALLMENT AMOUNT   VS   LOAN STATUS

OBSERVATION:

DEFAULTED loans show higher variability of Installment-Amount when compared to the FULLY-PAID loans.

Also, the maximum Installment-Amount is higher in DEFAULTED loans than in the FULLY-PAID one.

PROPOSAL :

LC management must verify the financial and vocation credentials of borrowers, especially <u>where higher Installment-Amounts</u> are involved, the feasibility of repayment of installments consistently.


Installments by Loan Status
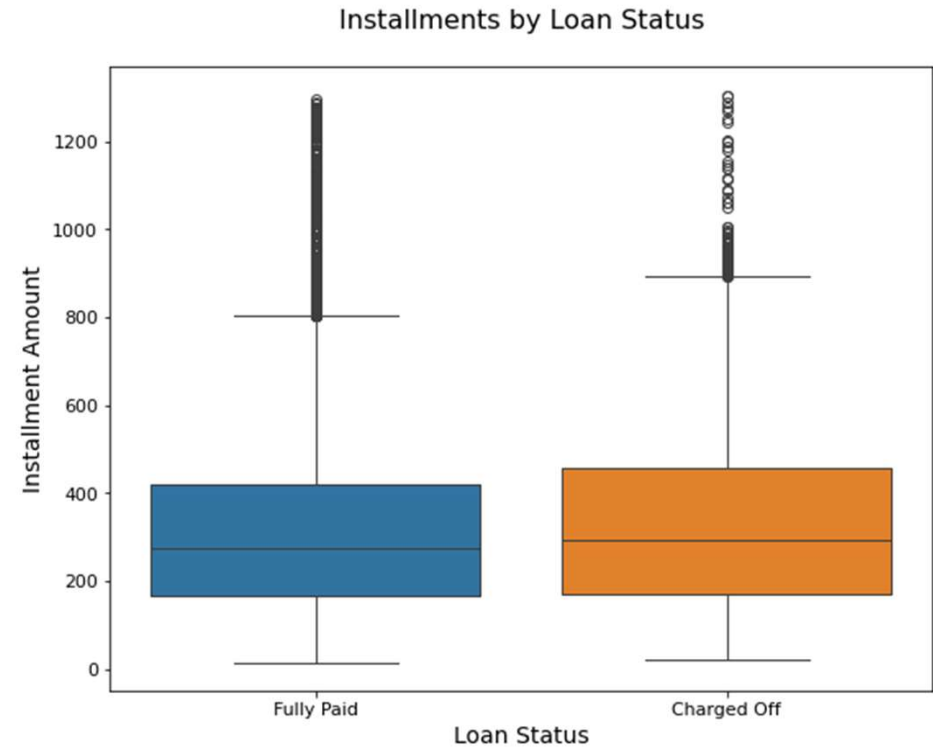
INTEREST RATES VS LOAN STATUS

OBSERVATION:

The Median-value of Interest-Rates for the DEFAULTER loans is significantly higher than that of the FULLY-PAID loans.

PROPOSAL :

LC management must verify the financial and vocation credentials of borrowers, especially where <u>higher Interest-Rates</u> are involved, the feasibility of repayment of installments.

Interest Rates by Loan Status
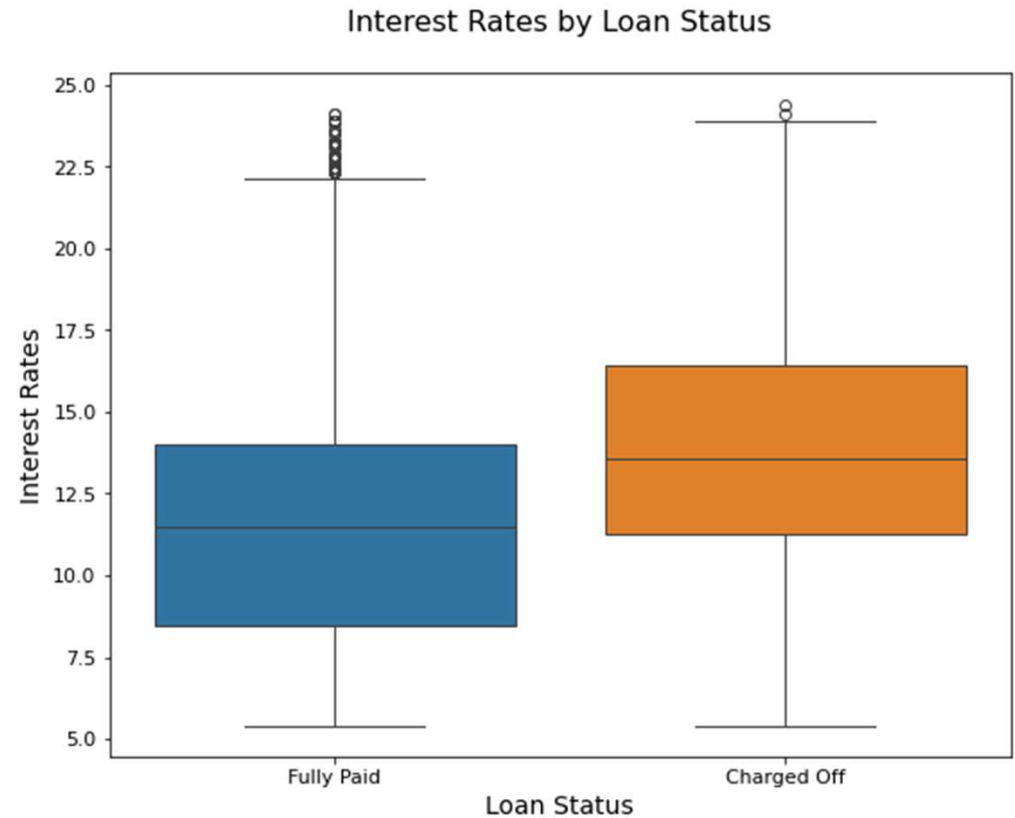
NUMBER OF LOANS   VS   INTEREST RATE CATEGORY

OBSERVATION:

The loans in medium-interest-rates are more popular than the low or high interest-rate loans.
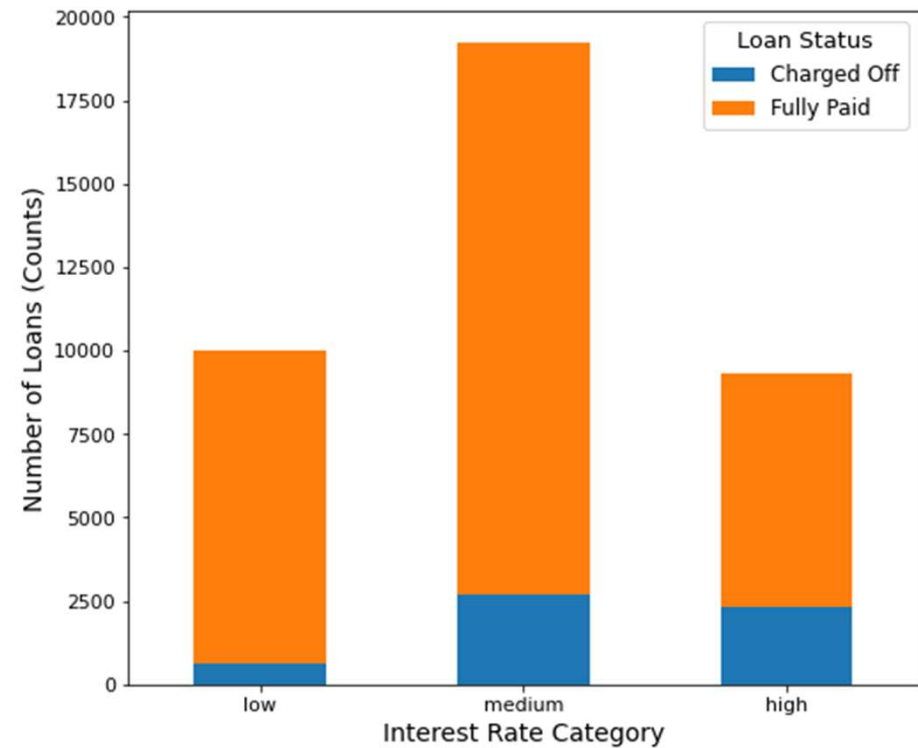
Loans which are FULLY-PAID mostly are the ones with medium-interest-rates.

PROPOSAL :

LC management can offer more loans in medium-interest-rate category due to their popularity and for also positive-closures resulting in profits to LC.

Distribution of Loan Status by Interest Rate Category

# NUMBER OF LOANS   VS   LOAN-DURATION

OBSERVATION:

The loans of 36-month period are more popular and are also more probable to be FULLY-PAID, than the one with 60-month period.

PROPOSAL :

LC management can offer more variety of loans of 36-month period due to higher closure-rate and popularity. This will help increase the profits of LC.

Distribution of Loan Status by Term Category
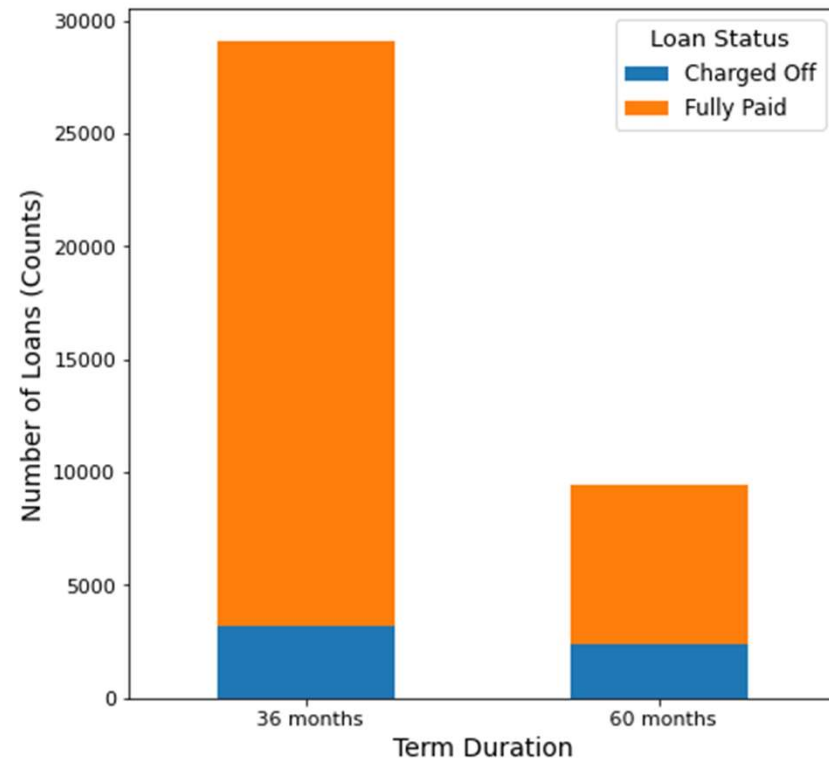
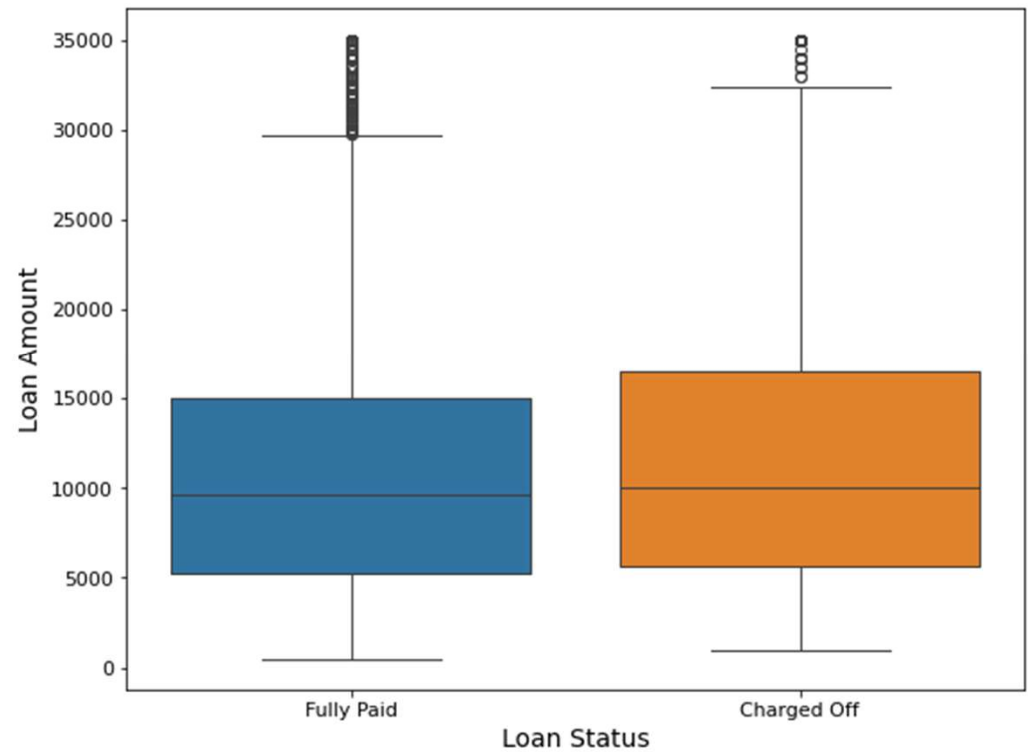# LOAN AMOUNT   VS   LOAN STATUS

OBSERVATION:

The Loan-Amounts exceeding 30000 are more likely to be DEFAULTED.

PROPOSAL :

LC management can limit the Loan-Amount values to increase the possibility of FULLY-PAID category. This will helpthe LC minimize their losses.

Distribution for Loan Amount by Loan Status

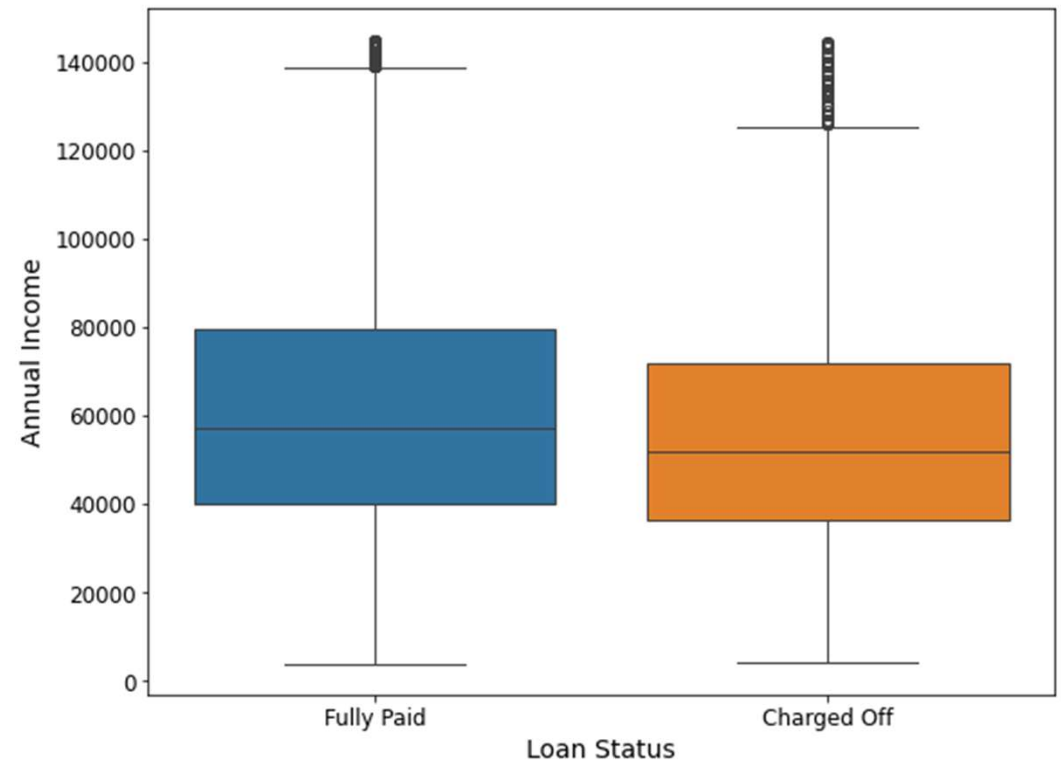# ANNUAL INCOME   VS   LOAN STATUS

OBSERVATION:

Loans disbursed to borrowers whose Annual-Income is higher than 80000 are more likely to be FULLY-PAID.

PROPOSAL :

LC management must ensure that due-diligence on the borrowers are done based on their Annual-Income to minimize defaults.

Annual Income Distribution by Loan Status

NUMBER OF LOANS DISBURSED   VS   EMPLOYMENT DURATION OF BORROWERS

OBSERVATION:

Maximum number of loans are disbursed to borrowers with less-than 1-year of employment/work-experience. The tendency to take loans reduces when number of years in employment increases.

PROPOSAL :

LC management could focus on borrowers who are in their first job and make it attractive for them to take loans. This helps LC increase their lending.


Distribution of Employment Length
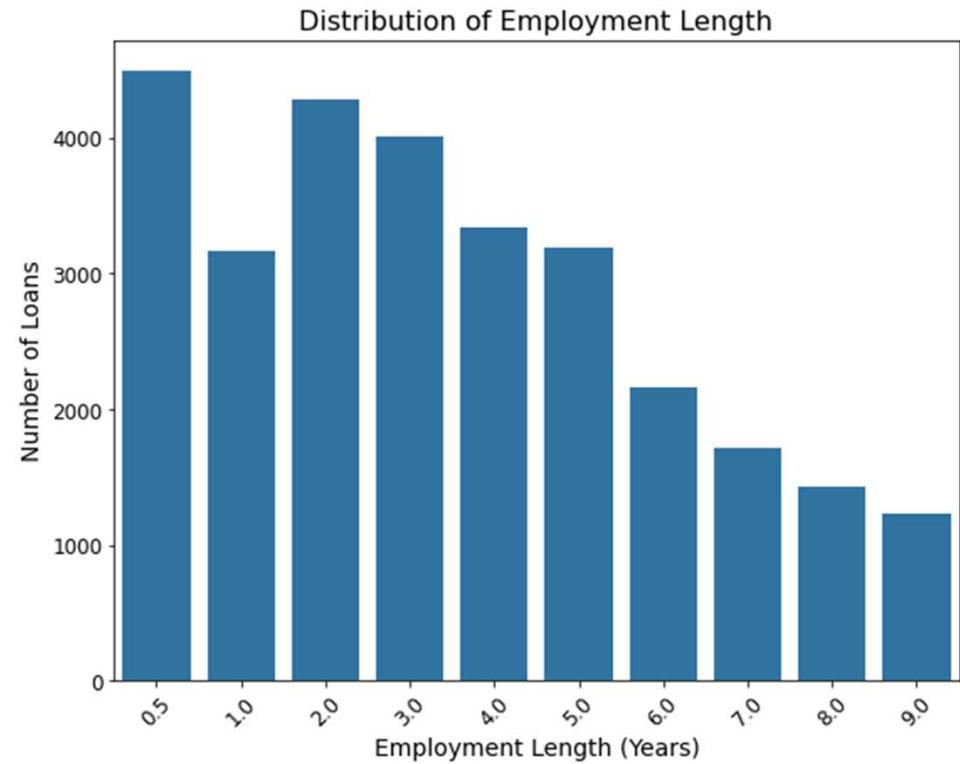
NUMBER OF LOANS DISBURSED   VS   HOME OWNERSHIP

OBSERVATION:

Maximum number of loans are disbursed to borrowers who are on rent or have mortgage. Very low number of borrowers own their home.
Within these two categories most loans get FULLY-PAID.

PROPOSAL :

LC management could focus on borrowers who are renting and/or have mortgage and make their loan packages fine-tuned for such borrowers.


Loan Status Distribution by Home Ownership
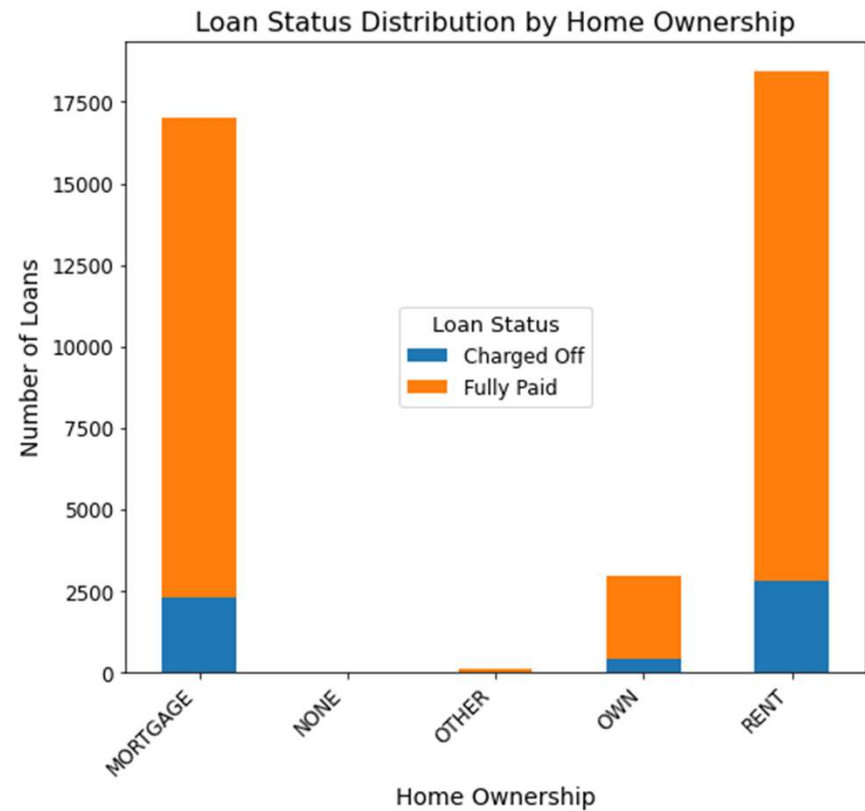
NUMBER OF LOANS DISBURSED   VS   VERIFICATION STATUS

OBSERVATION:

Maximum number of loans are disbursed to borrowers whose credentials have not been verified.

PROPOSAL :

LC management must improve their due-diligence processes before disbursing loans to borrowers. LC have to verify the credentials of borrowers to reduce the risk of Defaulters.


Loan Status Distribution by Verification Status
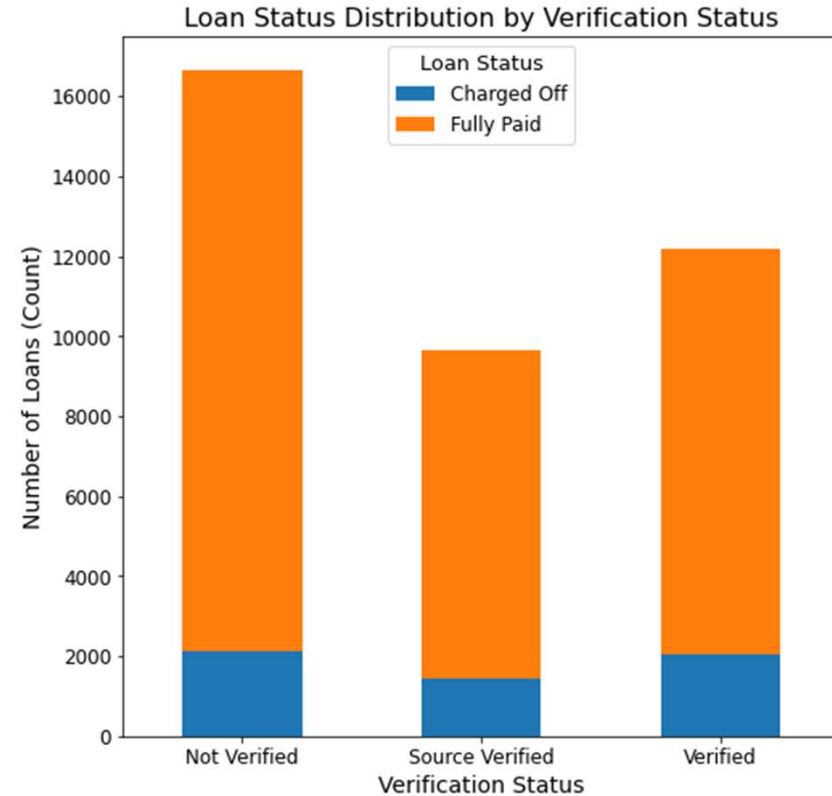
NUMBER OF LOANS DISBURSED   VS   PURPOSE OF LOAN

OBSERVATION:

Maximum number of loans are disbursed to borrowers who were in the need for debt-consolidation.

PROPOSAL :

LC management must be careful to evaluate if the borrowers are doing debt-consolidation for multiple-loans taken within LC. If so, then those cases must be flagged and resolutions planned. If this is not taken care of then such cases could increase risk for LC.


Loan Status Distribution by Purpose of Loan
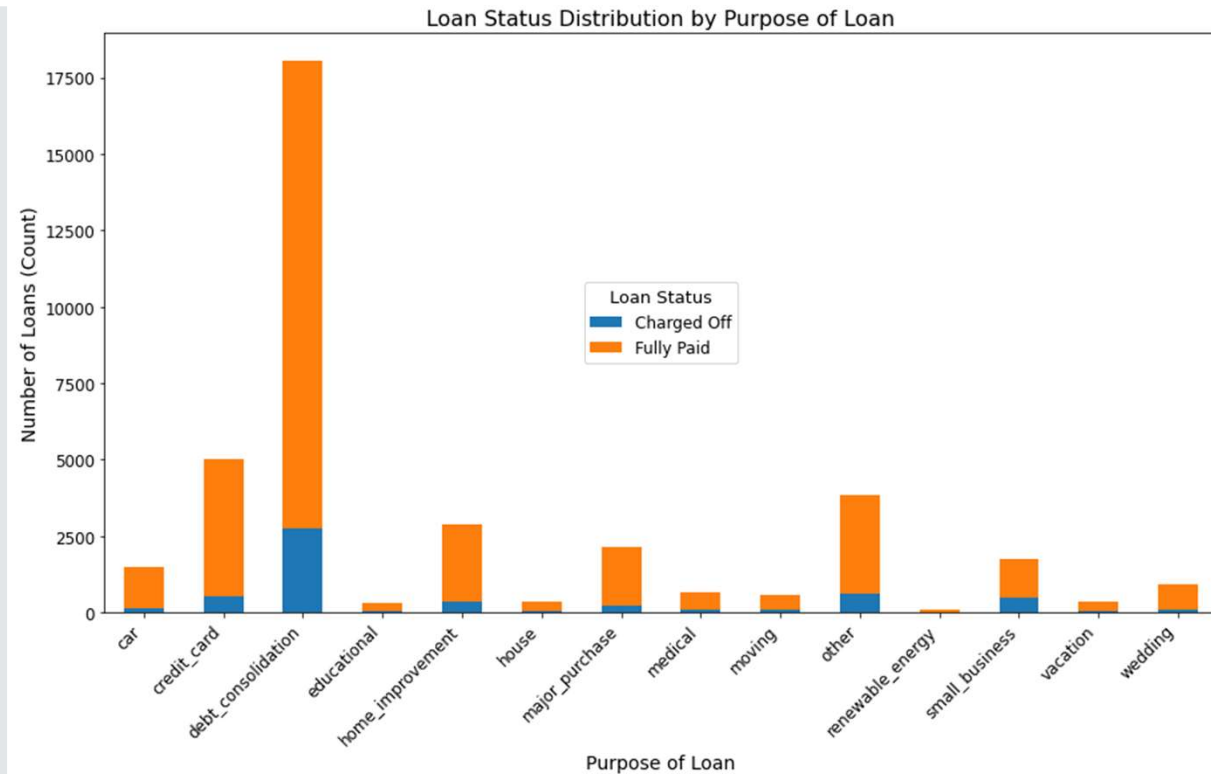
NUMBER OF LOANS DISBURSED   VS   STATE(REGION)

OBSERVATION:

Maximum number of loans are disbursed to in CA state. Also, it seems to account for very high FULLY-PAID loans.

PROPOSAL :

LC management must focus more on CA-state/region to find their borrowers. This could mean more advertising and increasing their reach in CA-state by expanding their branches. Also, they can consolidate other region/state-branches where there is primary business of lending is low for LC.

Loan Status Distribution by Different States
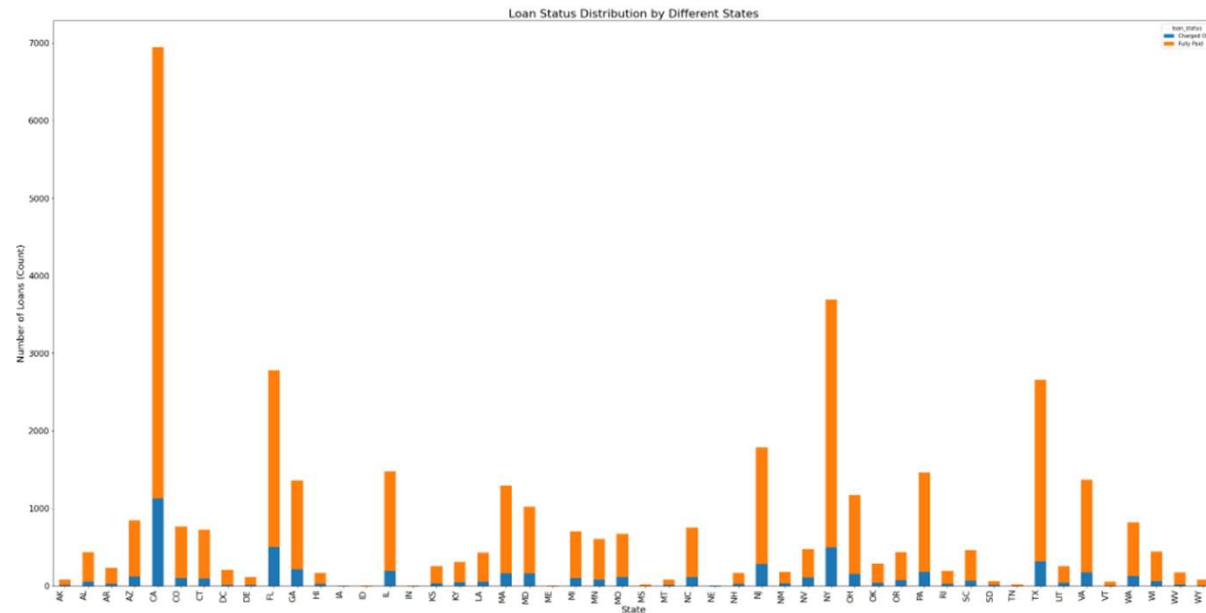
REVOLVING-LINE-UTILIZATION-RATE   VS   LOAN STATUS

OBSERVATION:

DEFAULTED loans tend to have much higher Revolving-Line-Utilization-Rate then the loans which were FULLY-PAID.

PROPOSAL :

LC management must keep track of the Revolving-Line-Utilization-Rate and raise a flag in their systems for any loan having the Revolving-Line-Utilization-Rate close to 70%. That should be the threshold. This will help LC management to take proactive measures to avoid such loans getting Charged-Off.
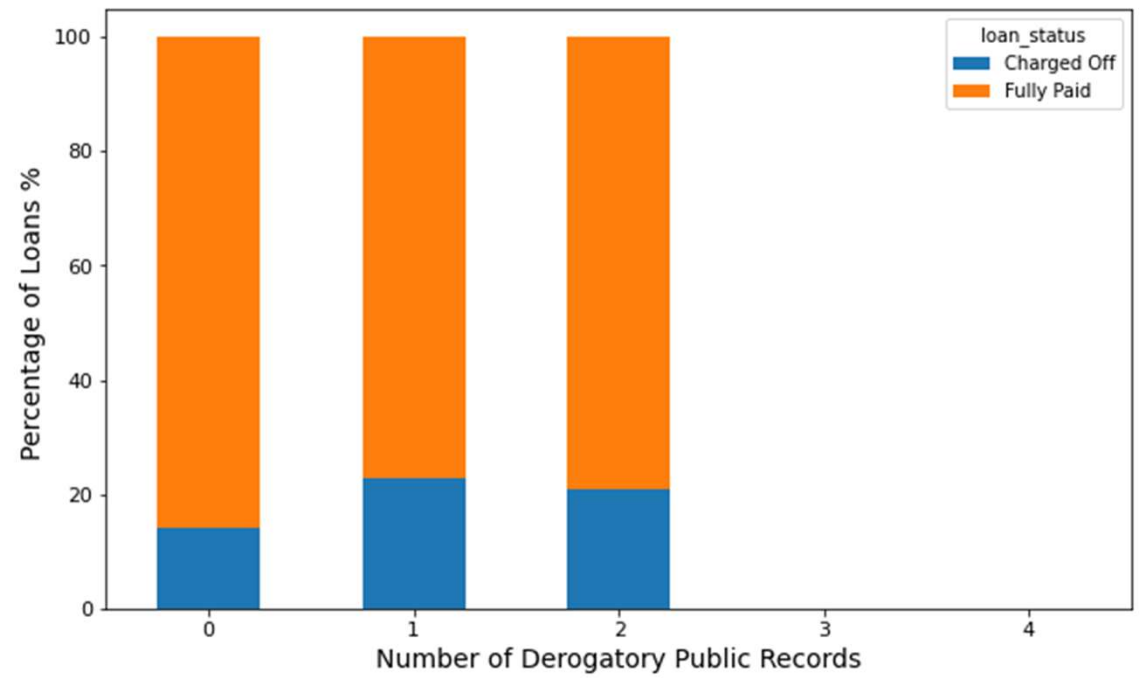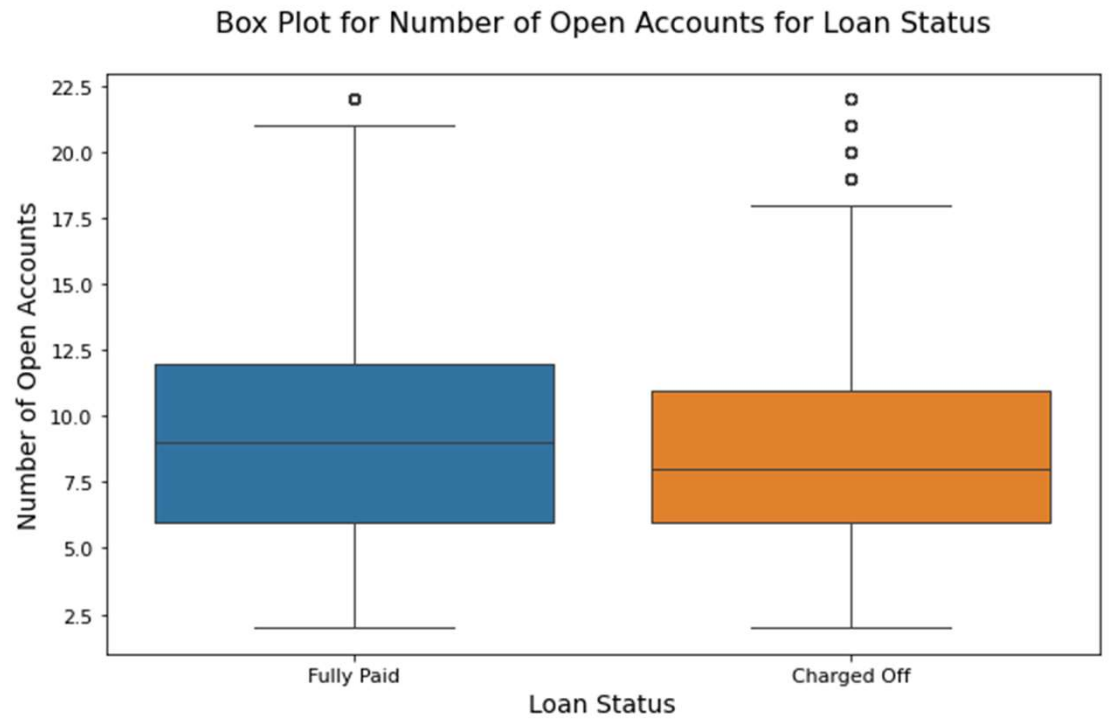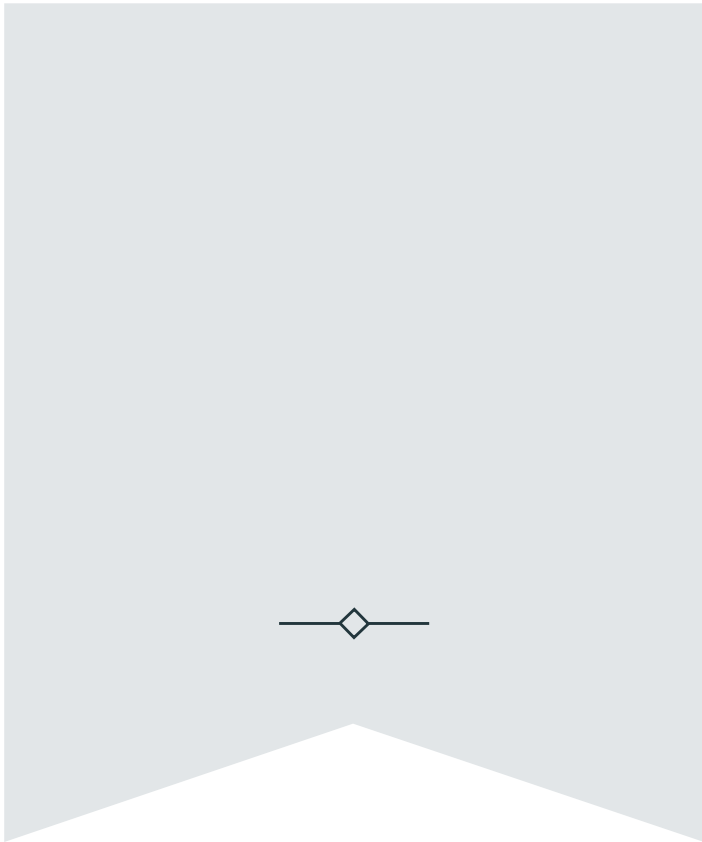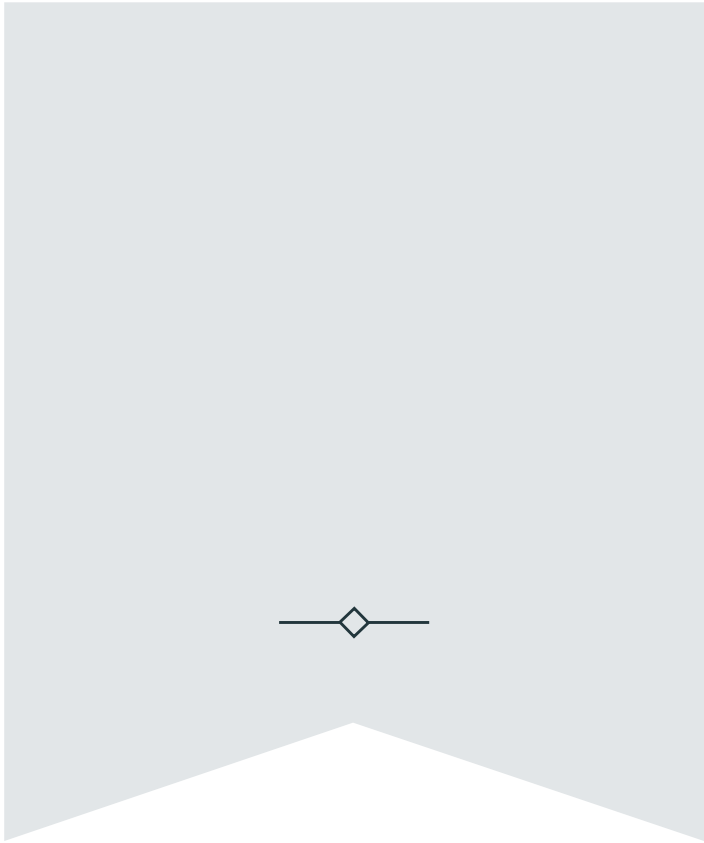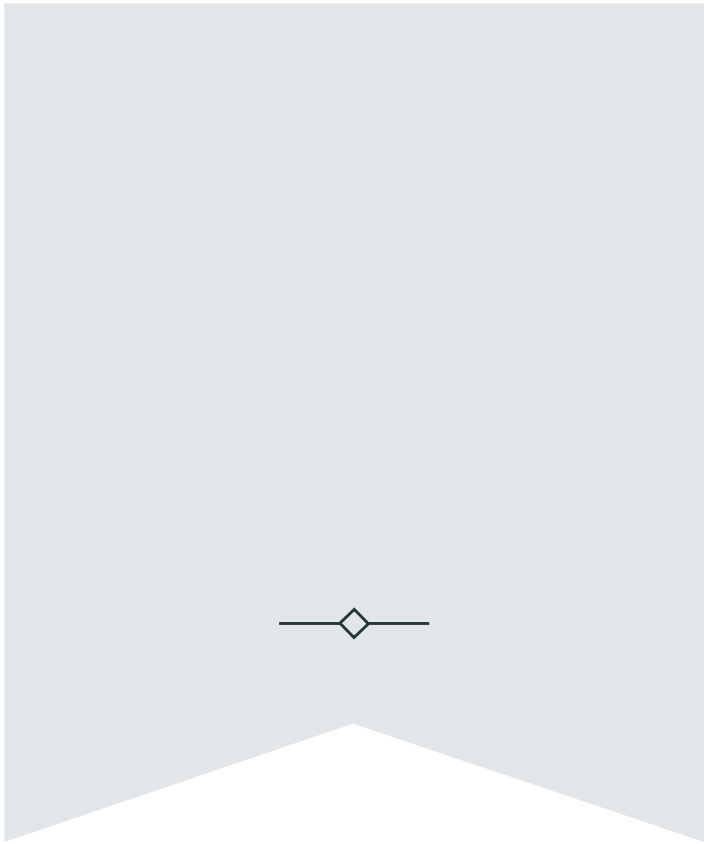

Box Plot for revol_util by Loan Status
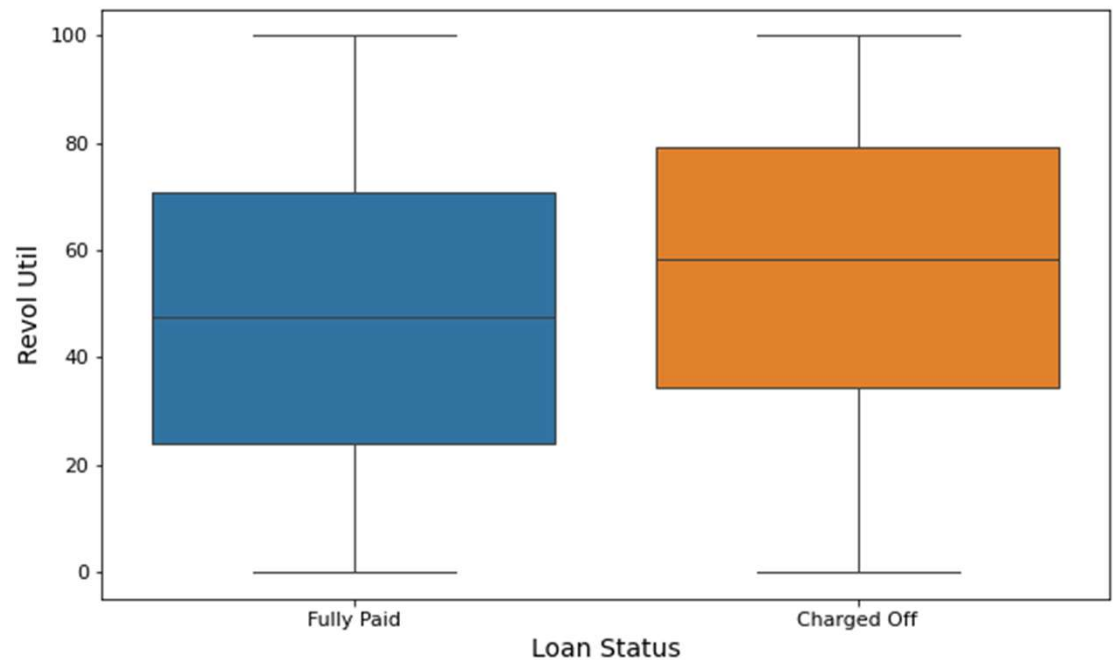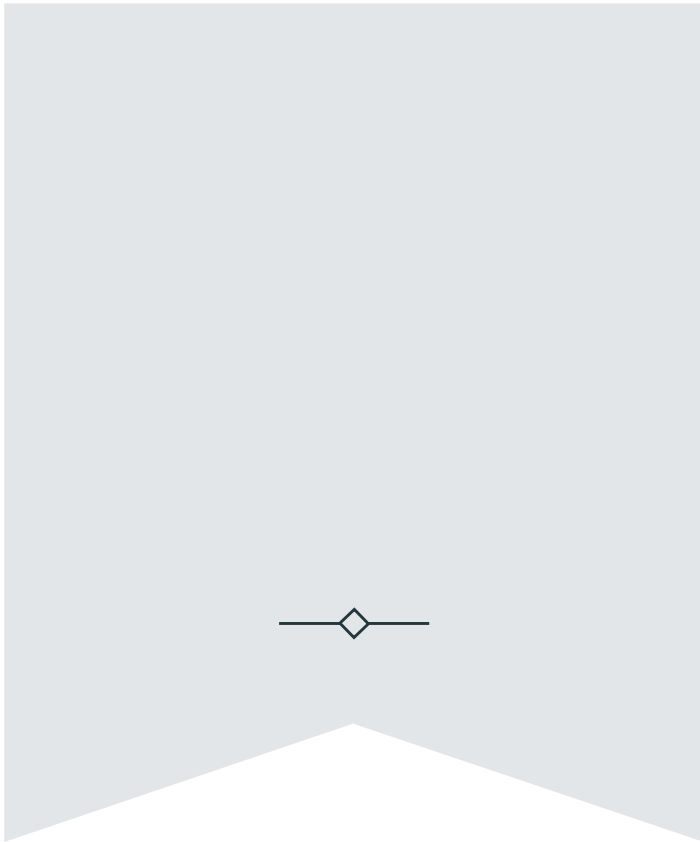
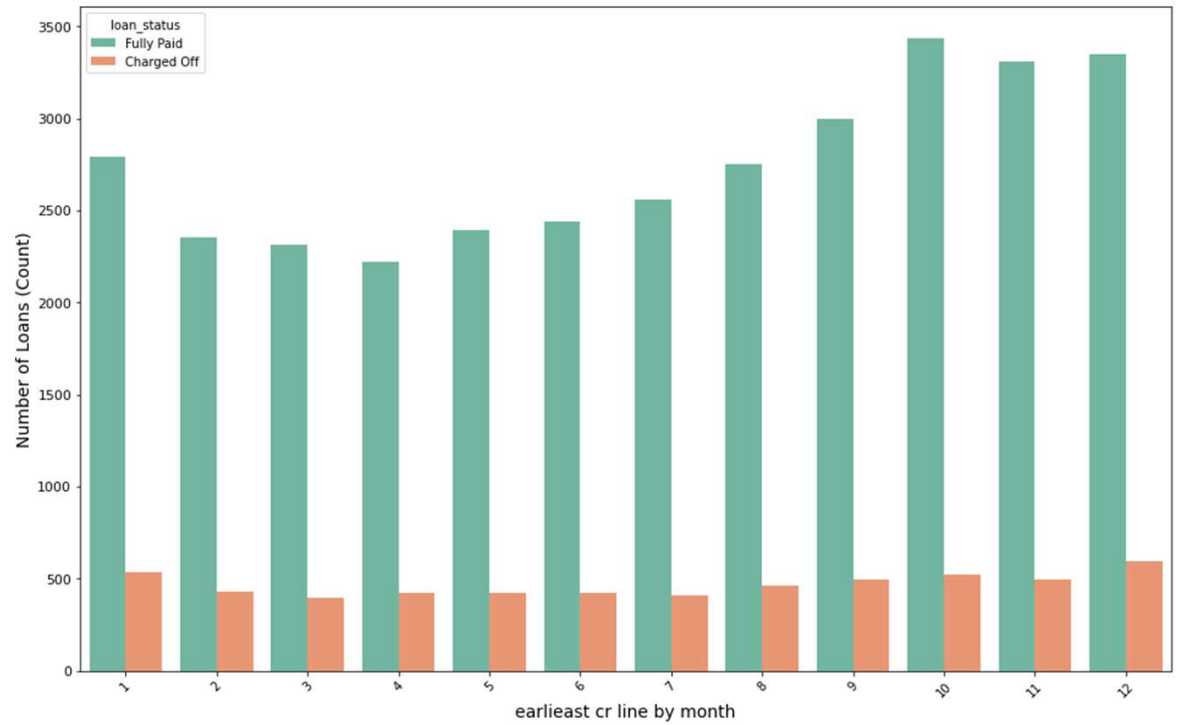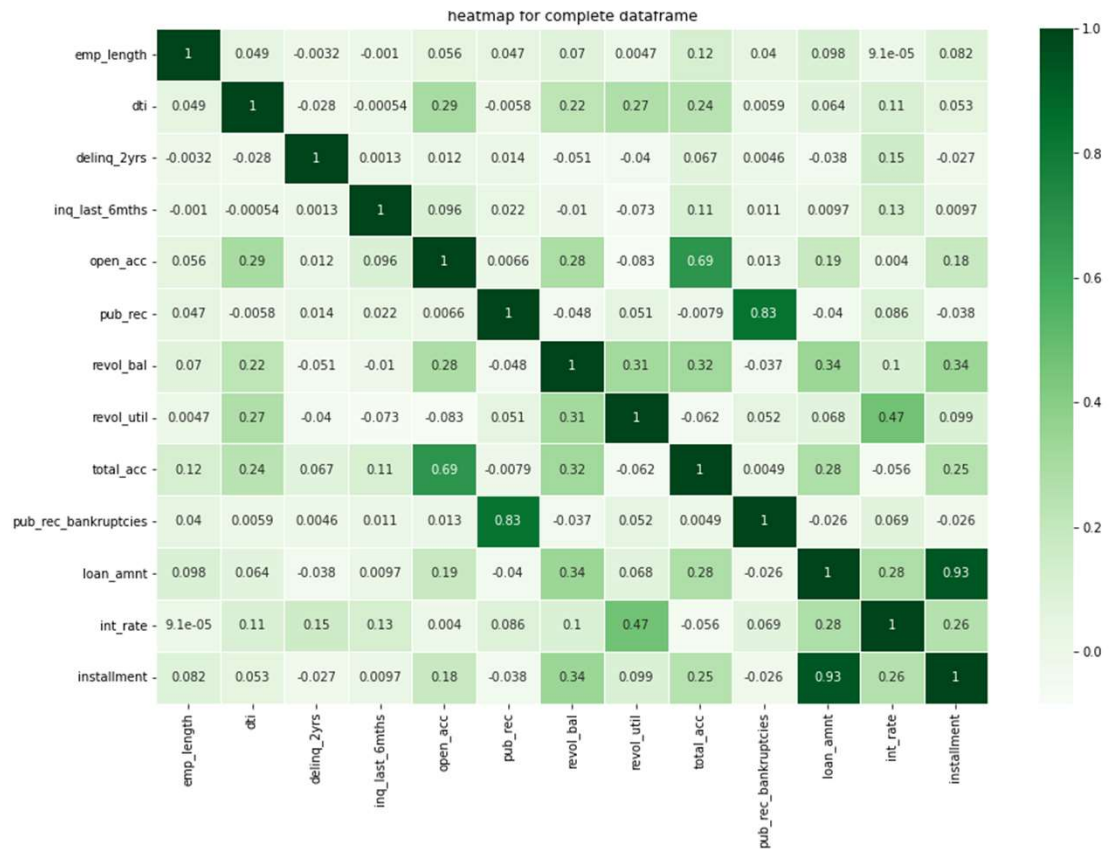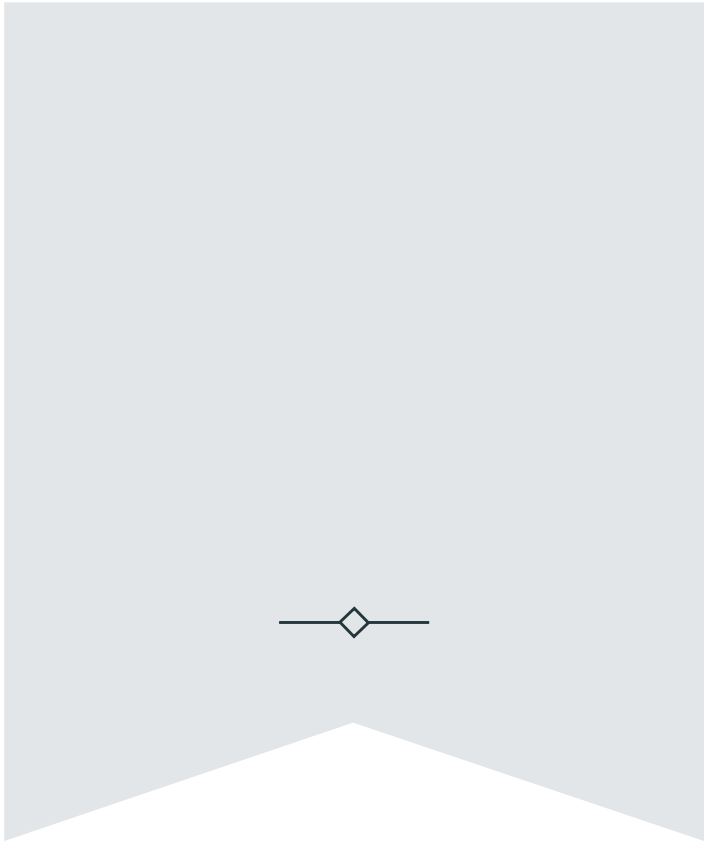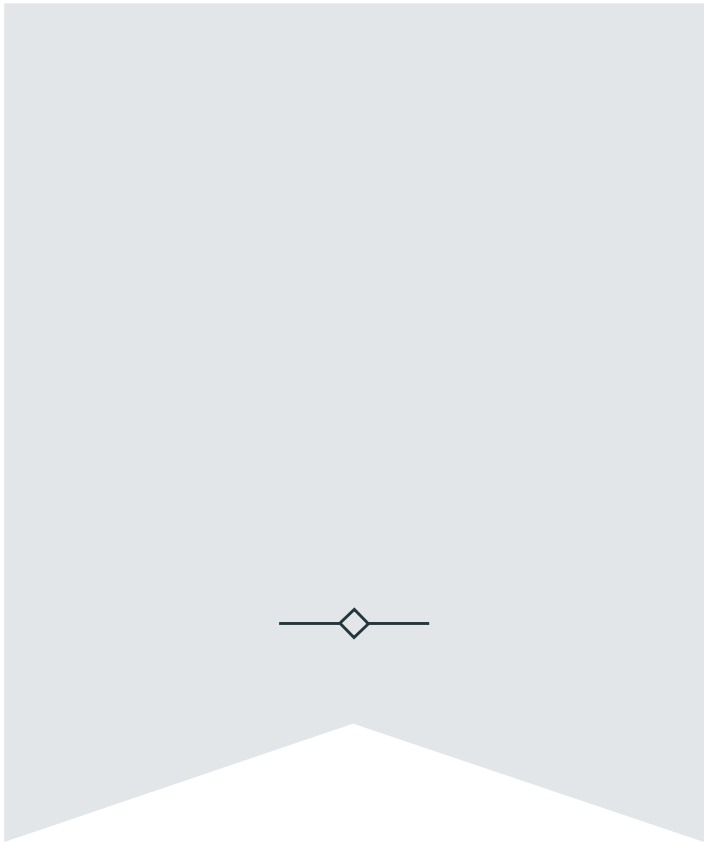Percentage Distribution for pub_rec for Loan Status

Box Plot for Number of Open Accounts for Loan Status
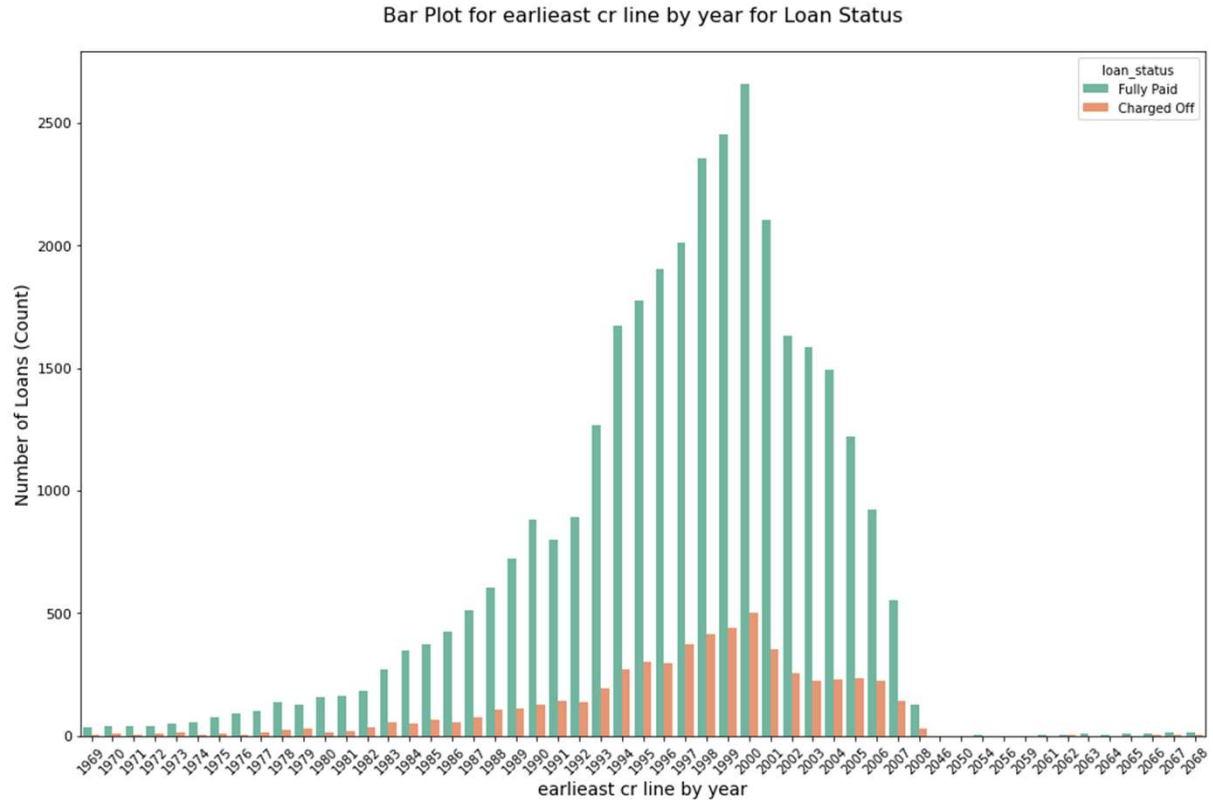
Bar Plot for earliest cr line by year for Loan Status

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Bar Plot for earlieast cr line by month for Loan Status

heatmap for complete dataframe

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THANK YOU

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