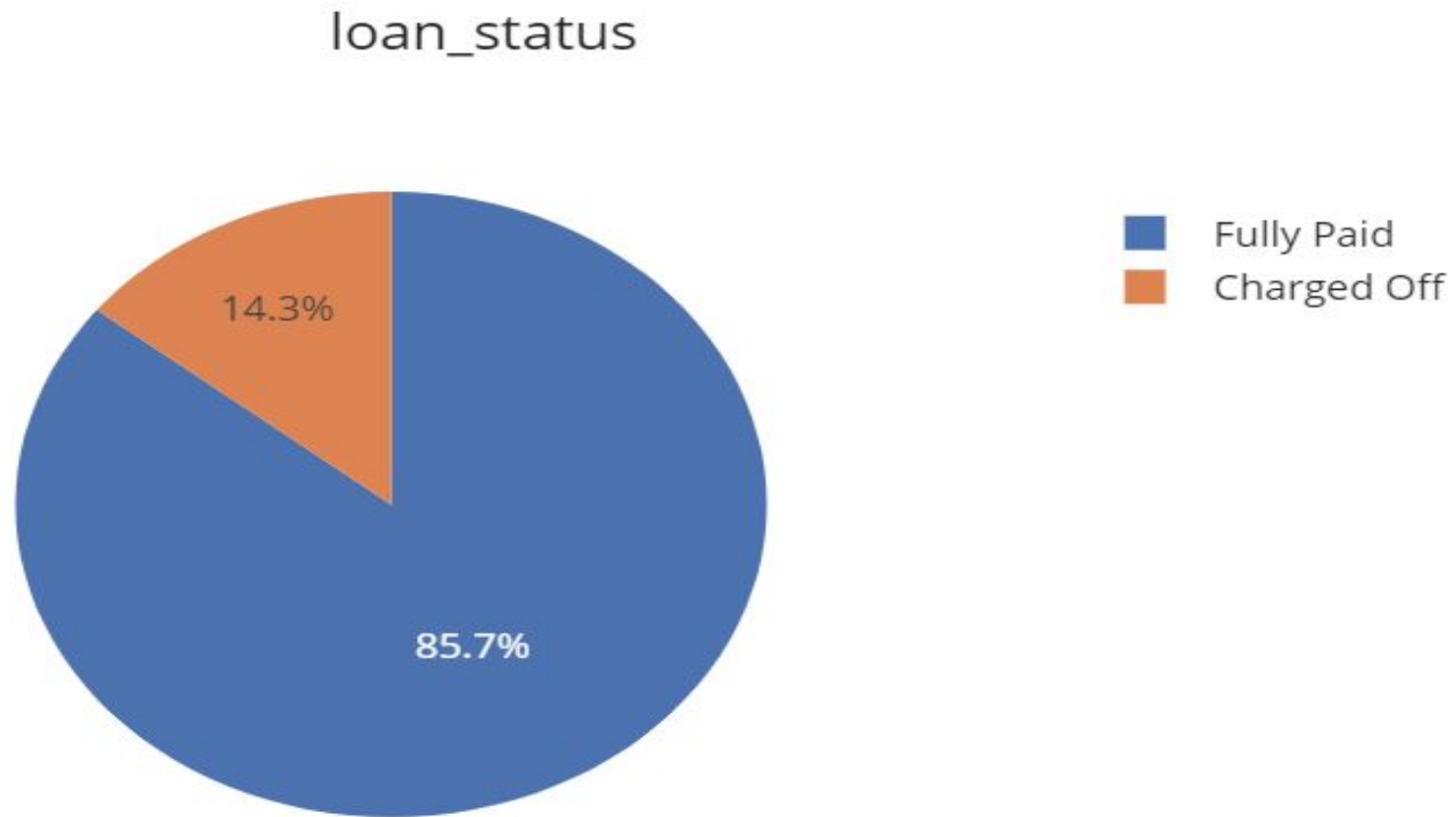


Lending Club Case Study

Problem Statement:

The data given contains the information about past loan applicants and whether they 'defaulted' or not. The aim is to identify patterns which indicate if a person is likely to default, which may be used for taking actions such as denying the loan, reducing the amount of loan, lending (to risky applicants) at a higher interest rate, etc.

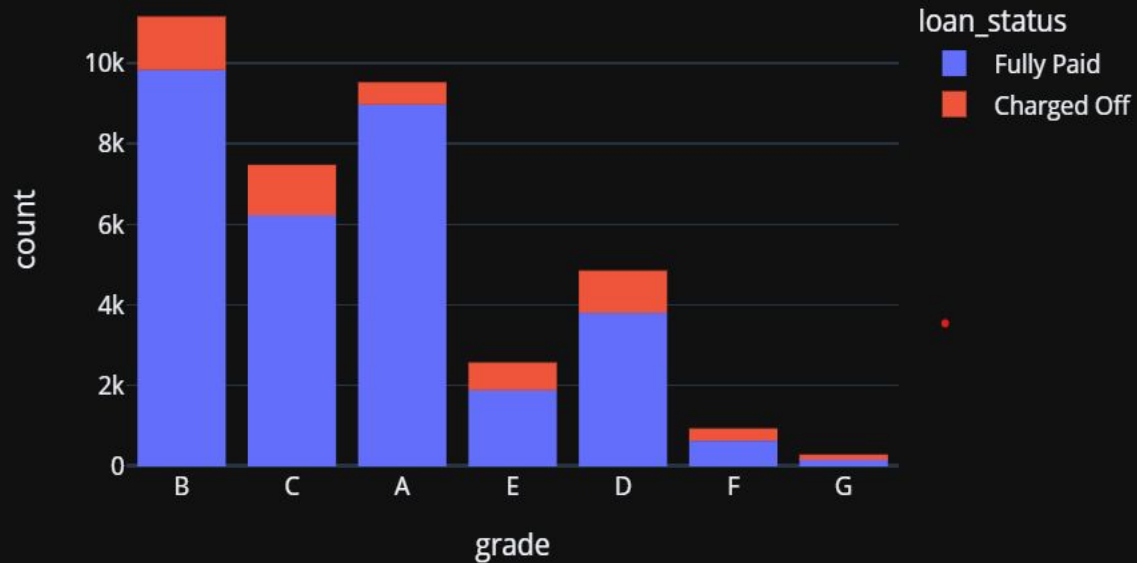
Loan Status Of Borrowers



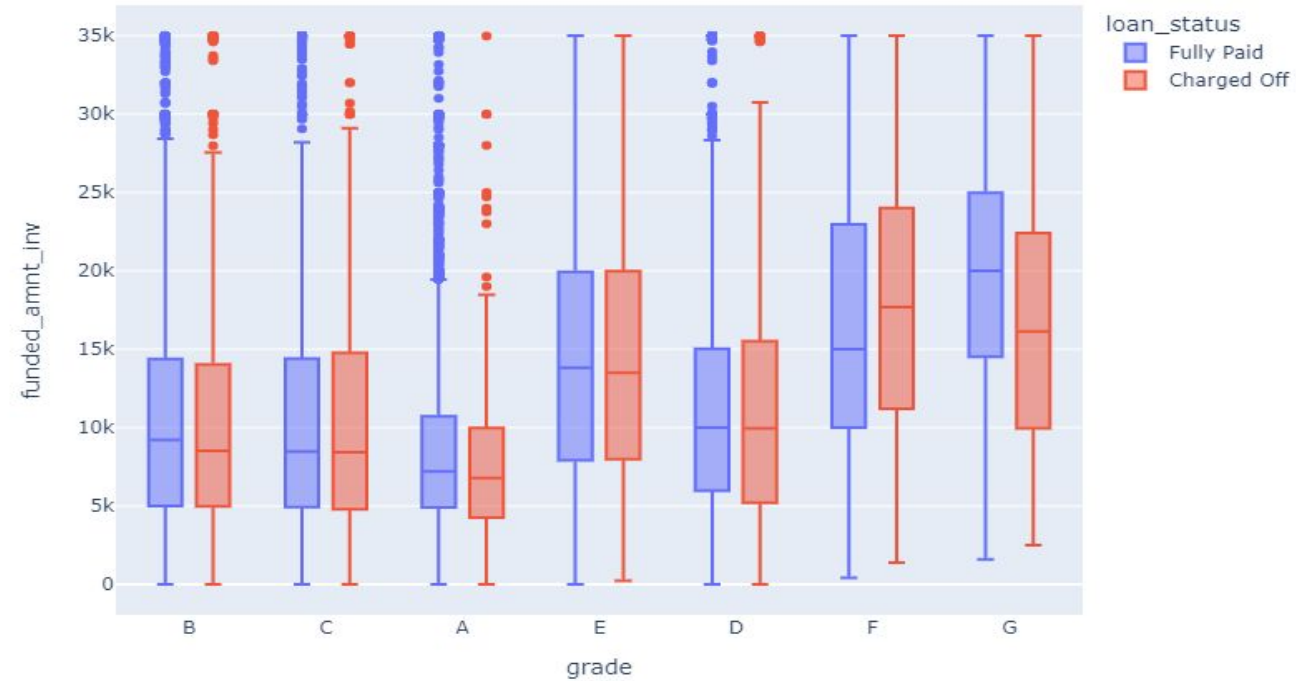
- 85% of the borrowers have fully paid the amount .
- 14.3% of the borrowers are charged Off.

Grade Of Borrowers

grade for defaulters



distribution of loan_status varying with grades and funded_amnt_inv



Insights

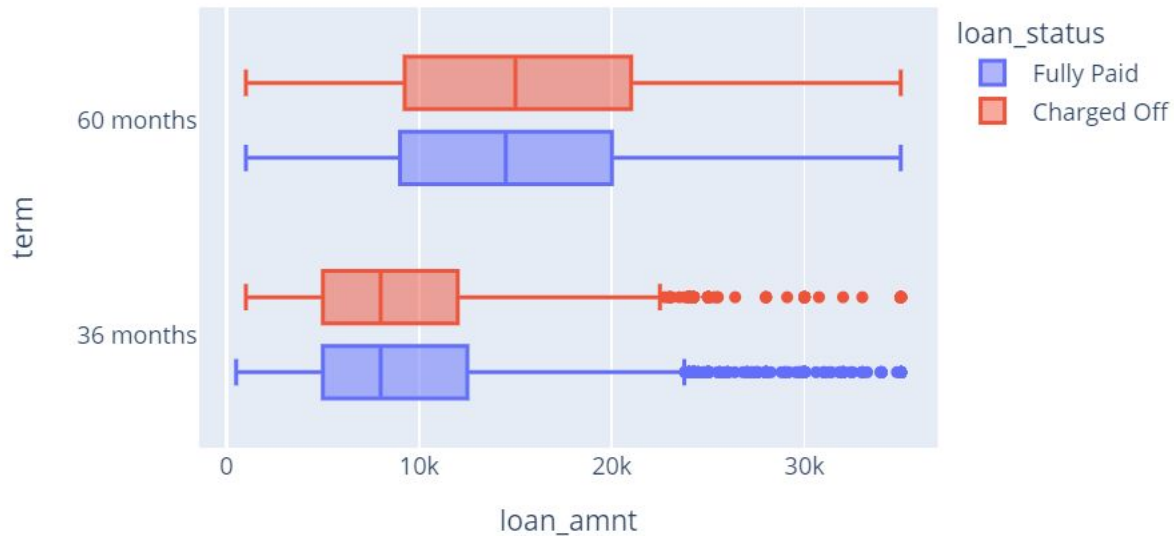
- Borrowers who fall under the grade 'F' have more defaulter ratio.

Recommendation

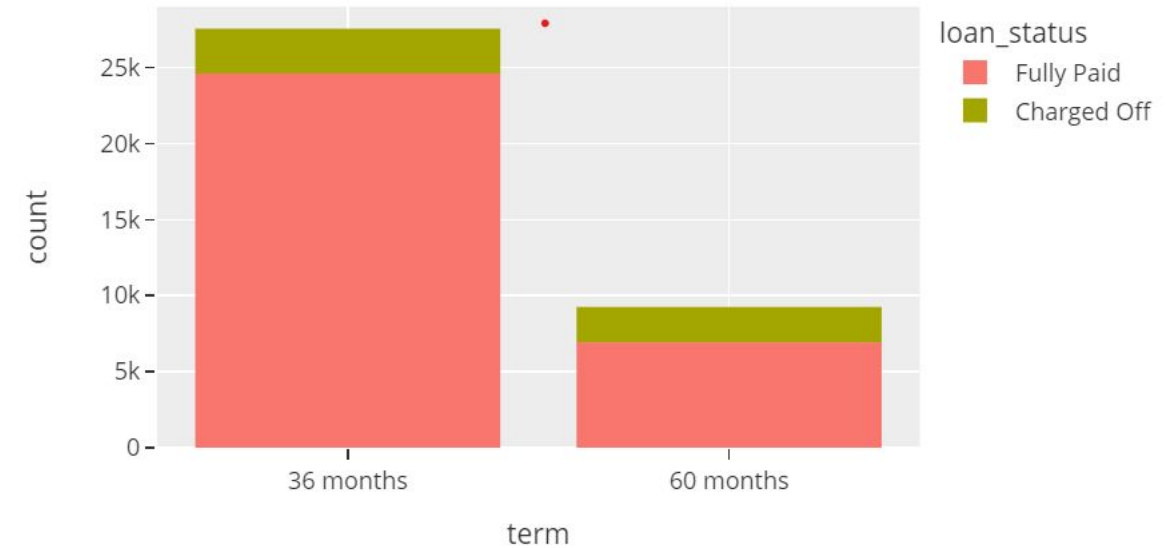
- Caution should be taken while lending loan to borrowers who fall under grade 'F'.

Loan Amount Vs Term

distribution of loan_status varying with loan_amnt and term



term for defaulters



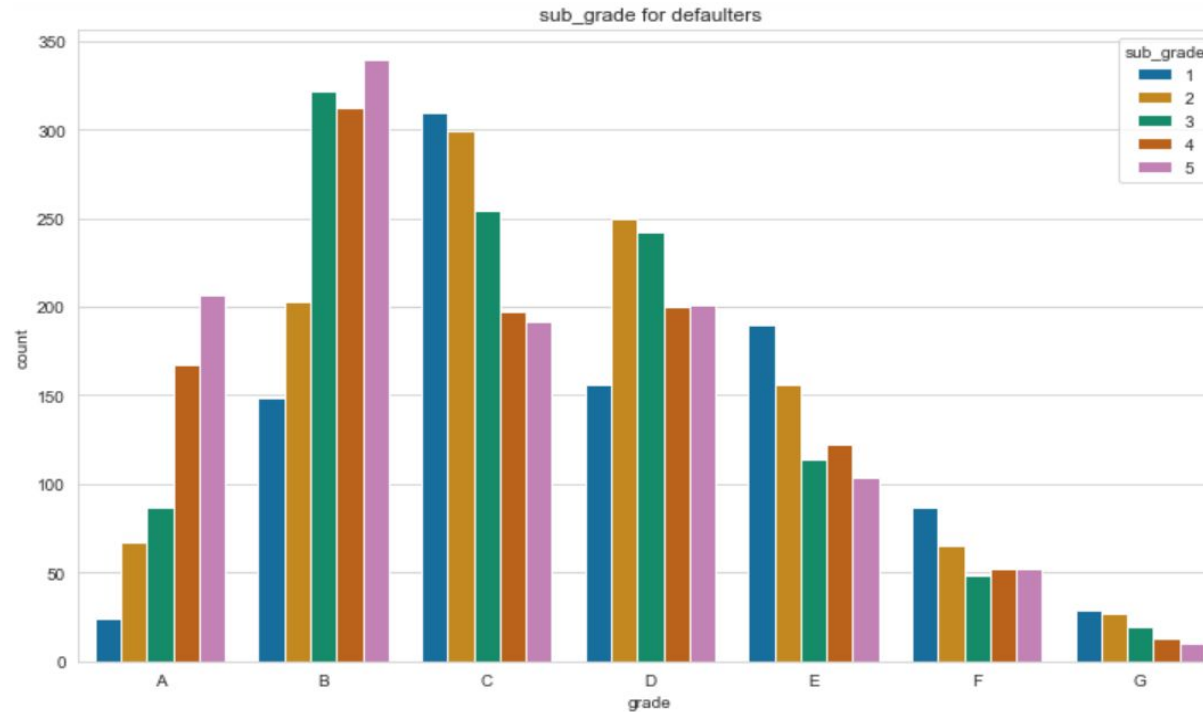
Insight

- Borrower who asked for higher loan_amnt along with chose longer period of term are more defaulters.

Recommendation

- Borrower asking for lower loan_amnt for shorter term shall be preferred over borrower asking for higher loan_amnt for longer term.

Sub grade of Borrowers



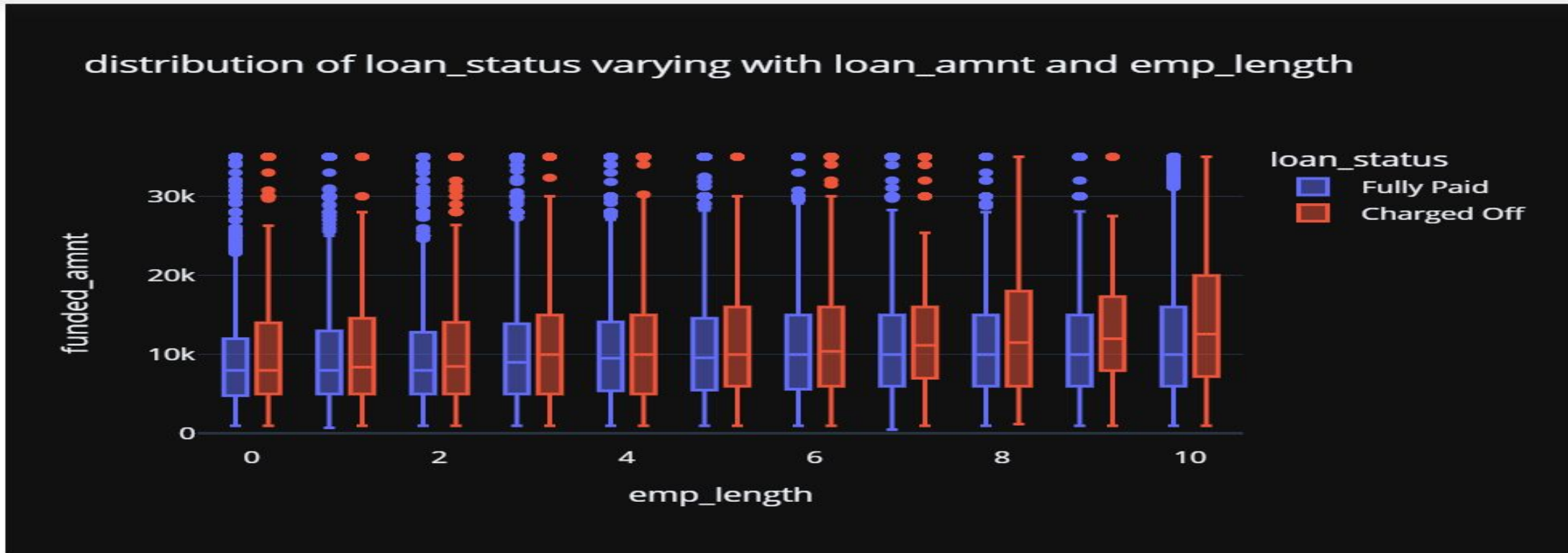
Insight

- for grade 'A' and 'B'-- sub_grade '5' tends to be more defaulters.
- for grade 'C', 'E', 'F' and 'G'-- sub_grade '1' tends to be more defaulters.
- for grade 'D'-- sub_grade '2' tends to be more defaulters.

Recommendation

- Caution should be taken when borrower applies for sub_grade mentioned above.

Employment Length Vs Funded Amount of Borrowers



Insights

- Borrowers who had employment of 10 years or plus got more funded amount and hence more of them were charged off.

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Recommendation

- Loan should not be approved on the basis of only employment tenure.

Home Ownership of Borrowers

home_ownership defaulter ratio



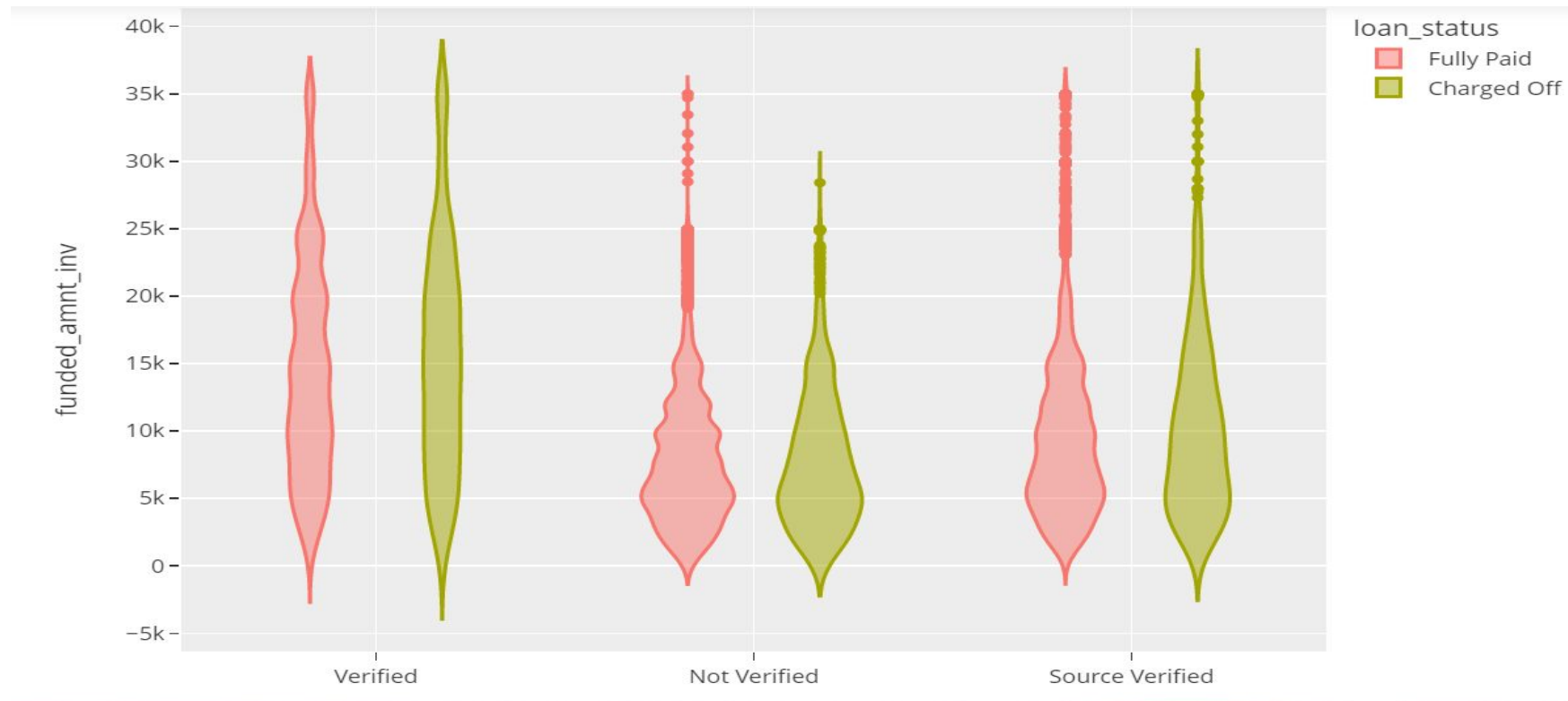
Insights

- Borrower having home ownership of 'Rent' and 'other' has higher defaulter ratio.

Recommendation

- Caution should be taken when borrower with home ownership as Rent or others apply for loans.

Verification Status Of Borrowers



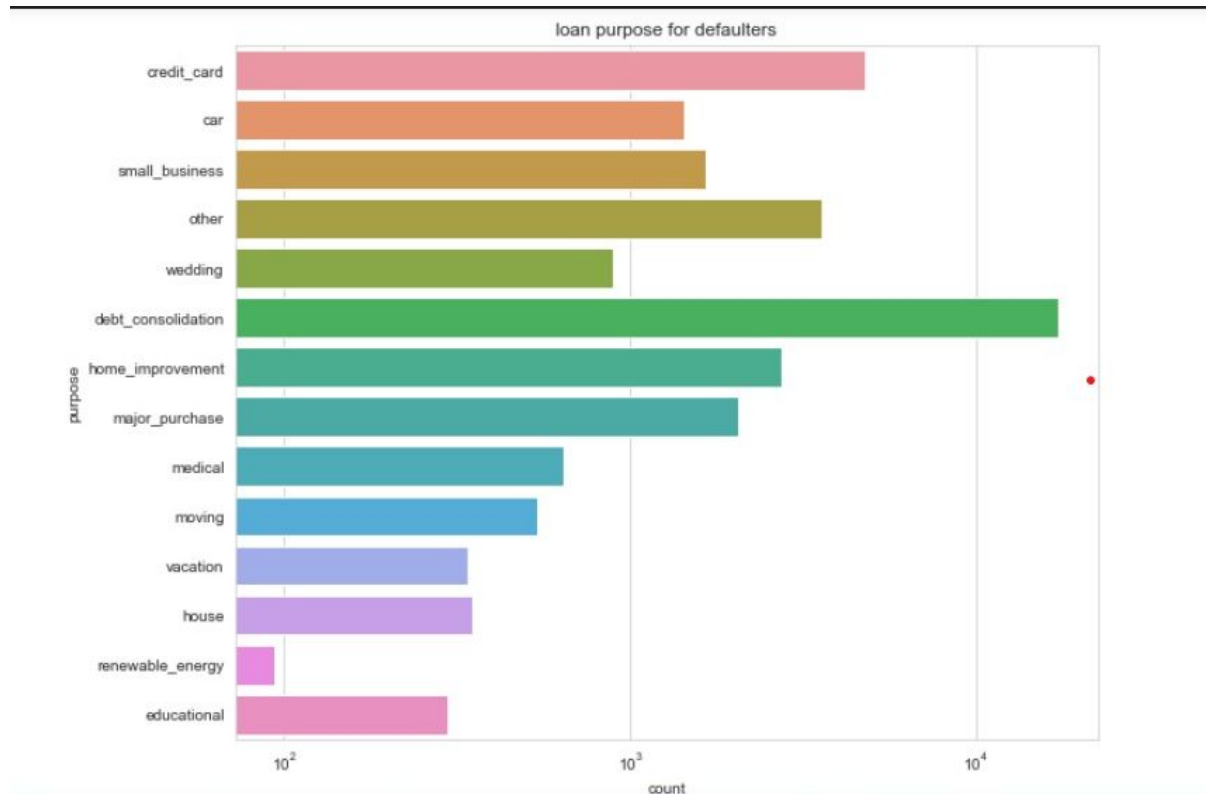
Insights

- Borrowers with verification status as not verified have been charged off more.

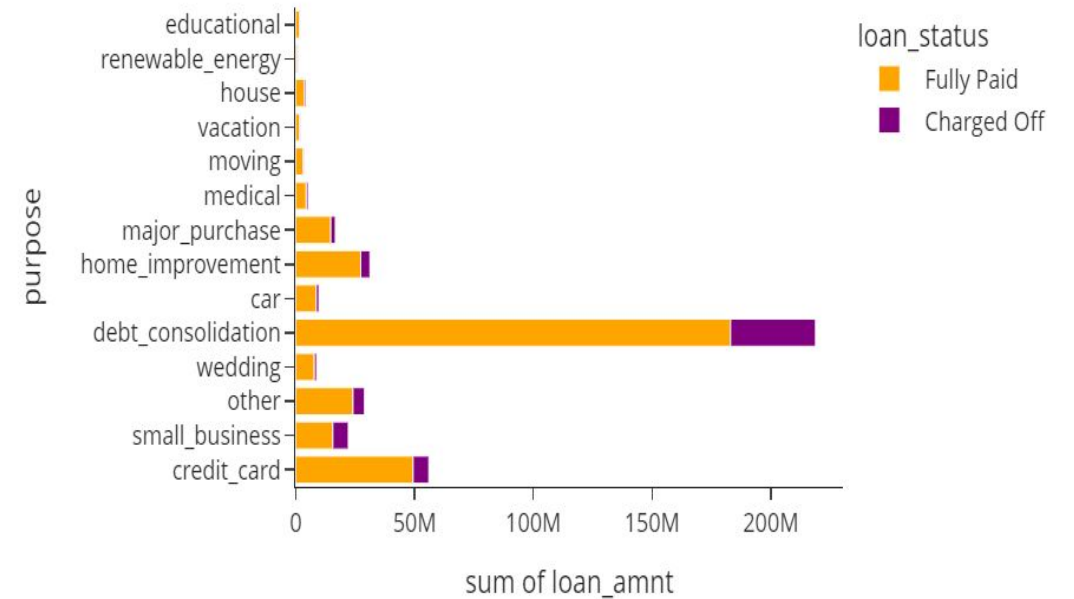
Recommendation

- Lending Loan to borrowers with verification status as not verified should be avoided.

Purpose for Borrowing the Loan



No. of Charged Off varying with purpose and loan_amnt



Insight

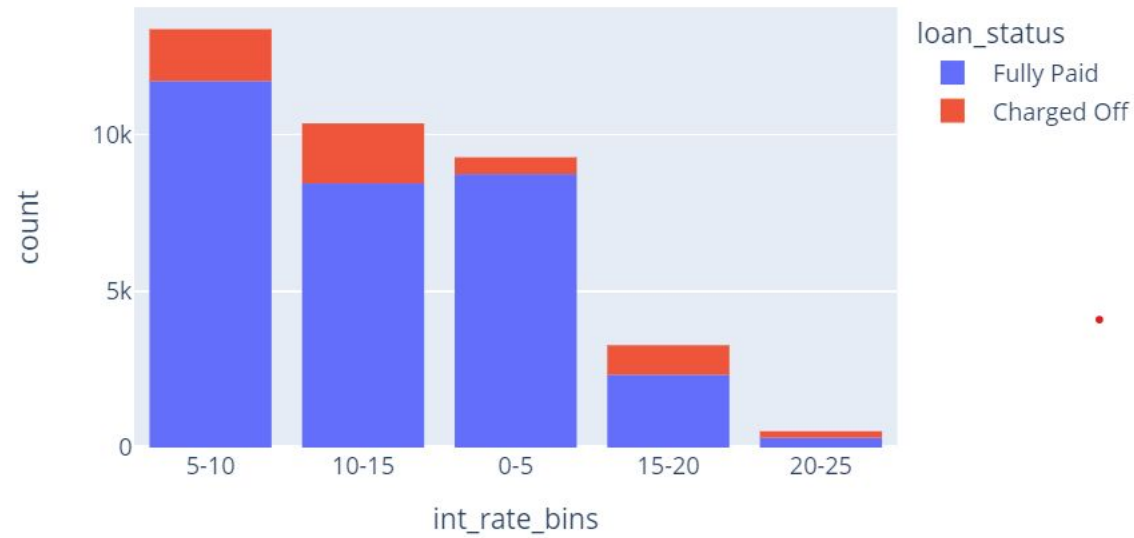
- More no of borrowers applied for Loan for the purpose of debt consolidation.
- Most of the Borrowers who were charged off had taken loan for debt consolidation.

Recommendation

- Caution should be taken while lending the loan to borrowers having purpose of debt consolidation.

Interest Rate on Loan for Borrowers

int_rate defaulter ratio



Insights

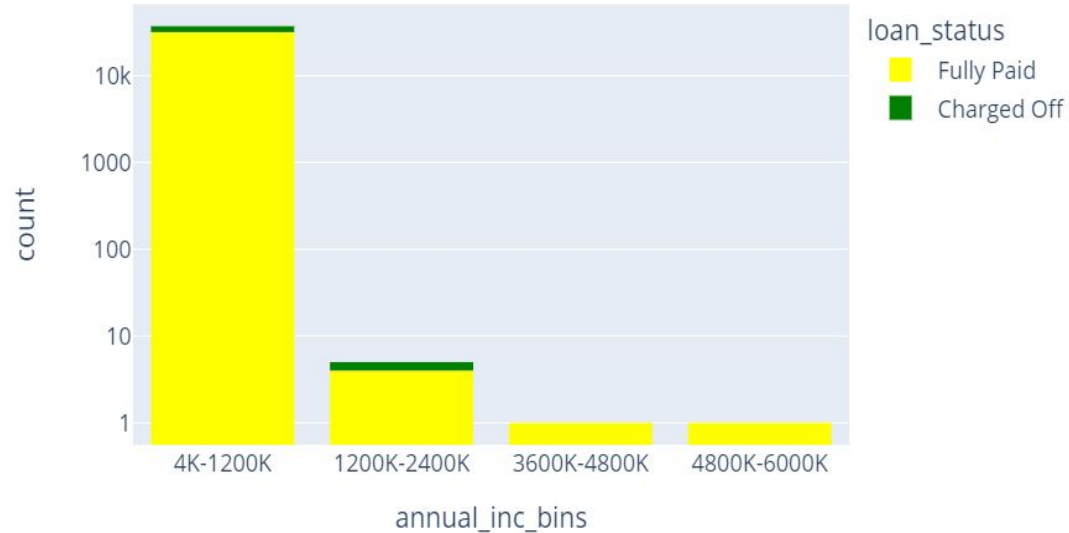
- Borrowers with int rate in range '20-25' has highest ratio of defaulter.
- Borrowers with int rate in range '0 – 5 ' has Lowest ratio of defaulter.

Recommendation

- loan should be lended with lower int rate.

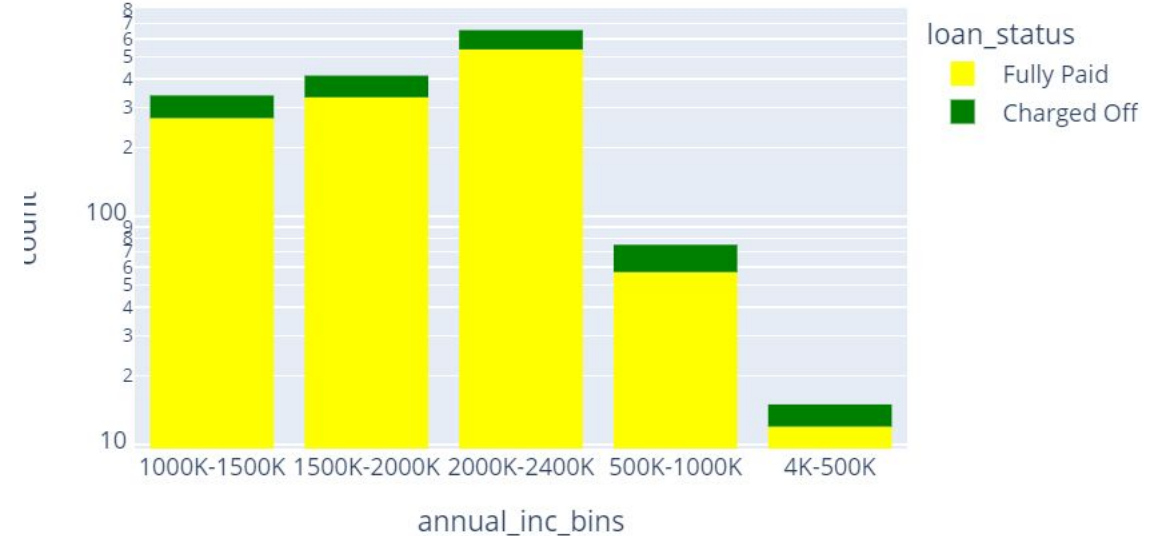
Annual Income of Borrowers

annual_inc defaulter ratio



Since defaulters does not lies in range above 2400K, so considering the range below it .

annual_inc(4K-2400K) defaulter ratio



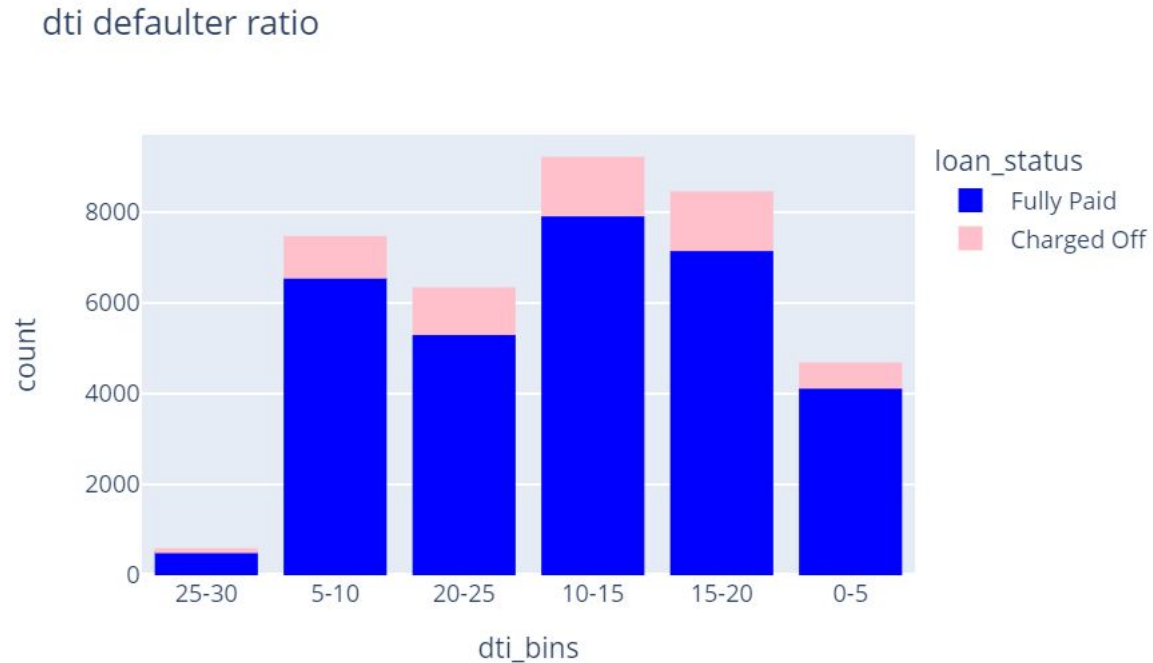
Insights:

- for borrowers having annual income in range 4K-2400K, lowest defaulter ratio lies in range 2000K-2400K.
- for borrowers having annual income in range 4K-2400K, higher defaulter ratio lies in range 4K-1500K.

Recommendation:

- Caution should be taken when borrowers with annual income in range 4K-1500K applies for loan.

DTI of Borrowers



Insight:

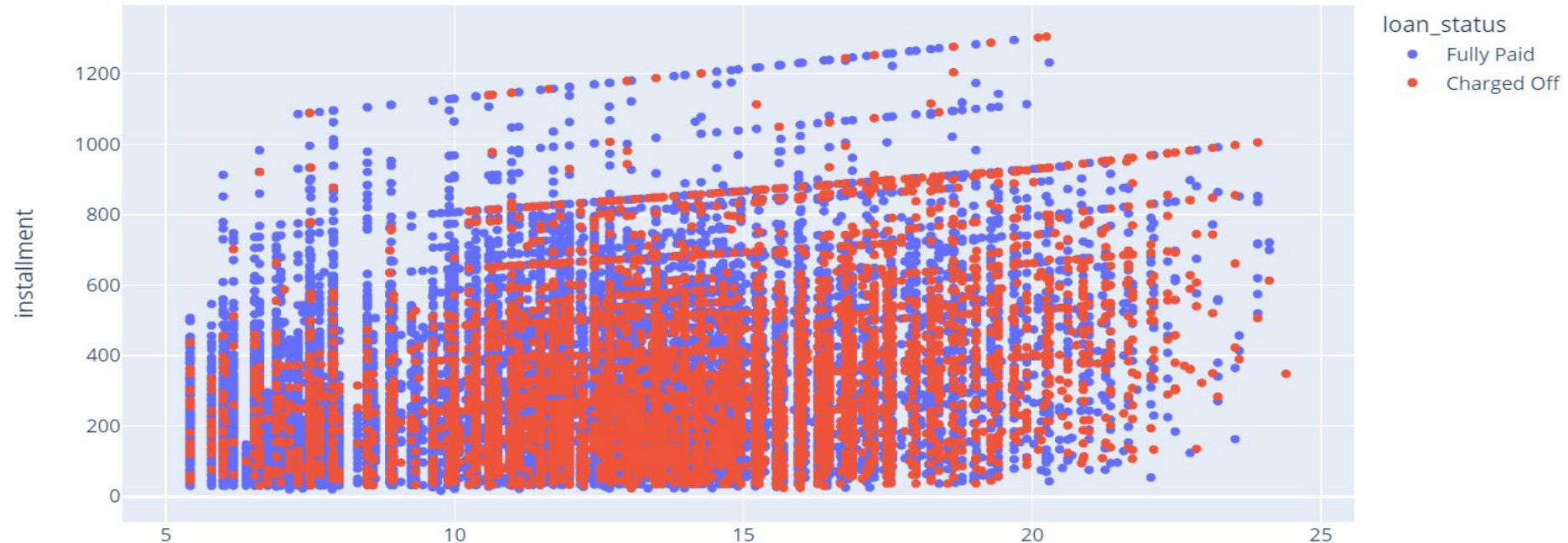
- Borrower having debt-to-income ratio in range 20-25 has high defaulter ratio.
- Borrower having debt-to-income ratio in range 0-10 has low defaulter ratio.

Recommendation:

- Lending Company shall avoid lending loan to borrower with high dti .

Installment Vs Interest Rate of Borrowers

No. of Charged Off varying with int_rate and installment



Insight

- when installment is >800 , number of Charged Off are less irrespective of int rate.
- when int_rate is <10 , number of Charged Off are less and as installment increases Charged Off decrease.

Recommendation

- Decreasing int_rate and increasing number of installments results in lesser number of Charged Off.

Thank You

Submitted By:

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