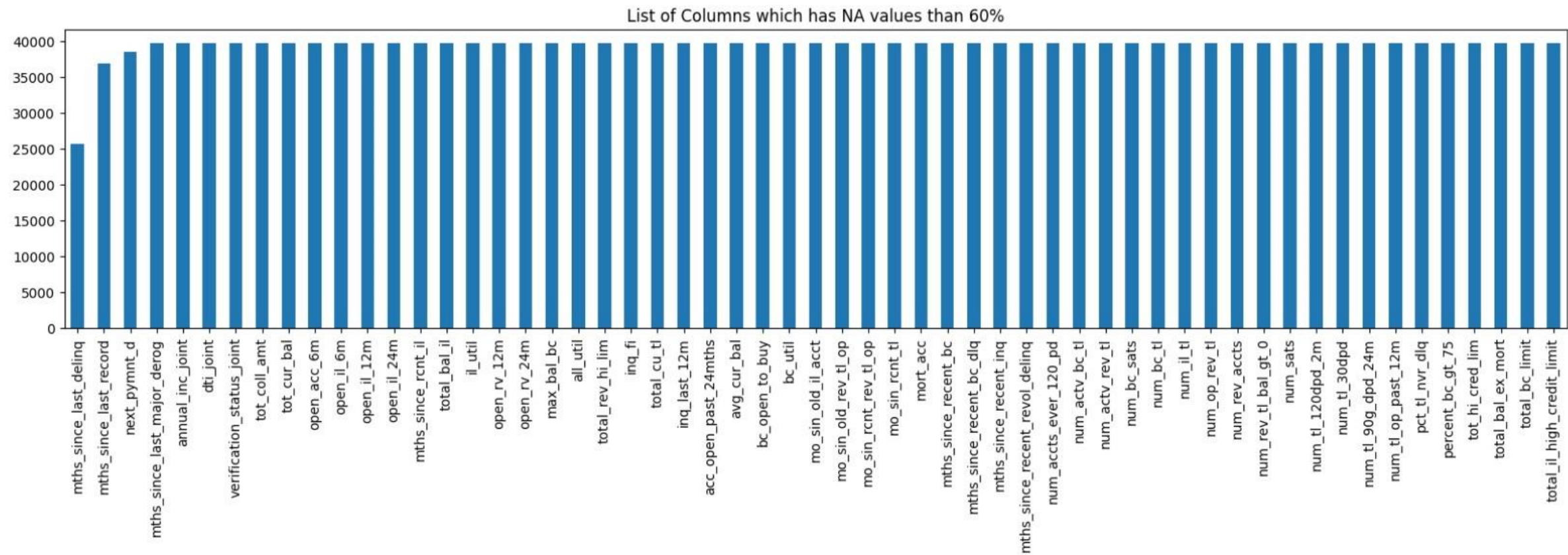# Lending Club Case Study

The complete analysis on loan.csv dataset

Data Cleaning
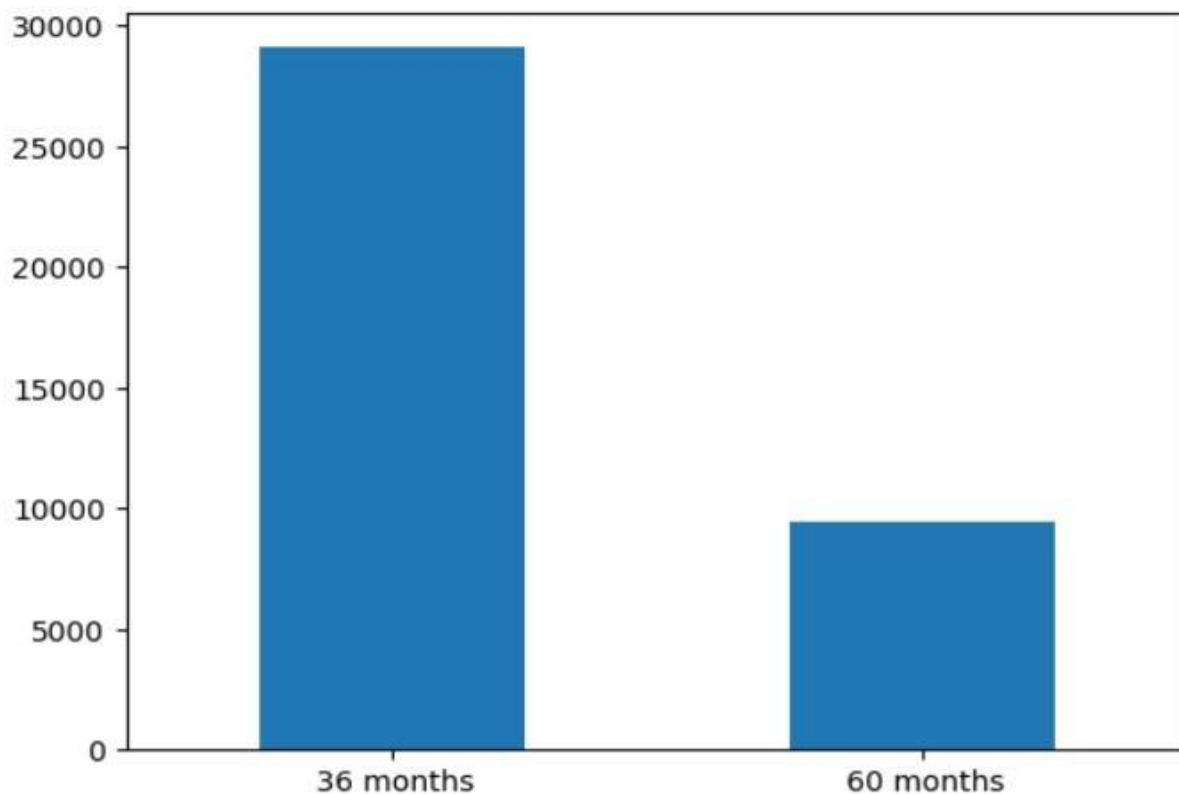
- There are 48% of total column which contain all Null Values. Hense we drop them for better analysis.

List of Columns which has NA values than 60%

Data Analysis

1. Univariate Analysis
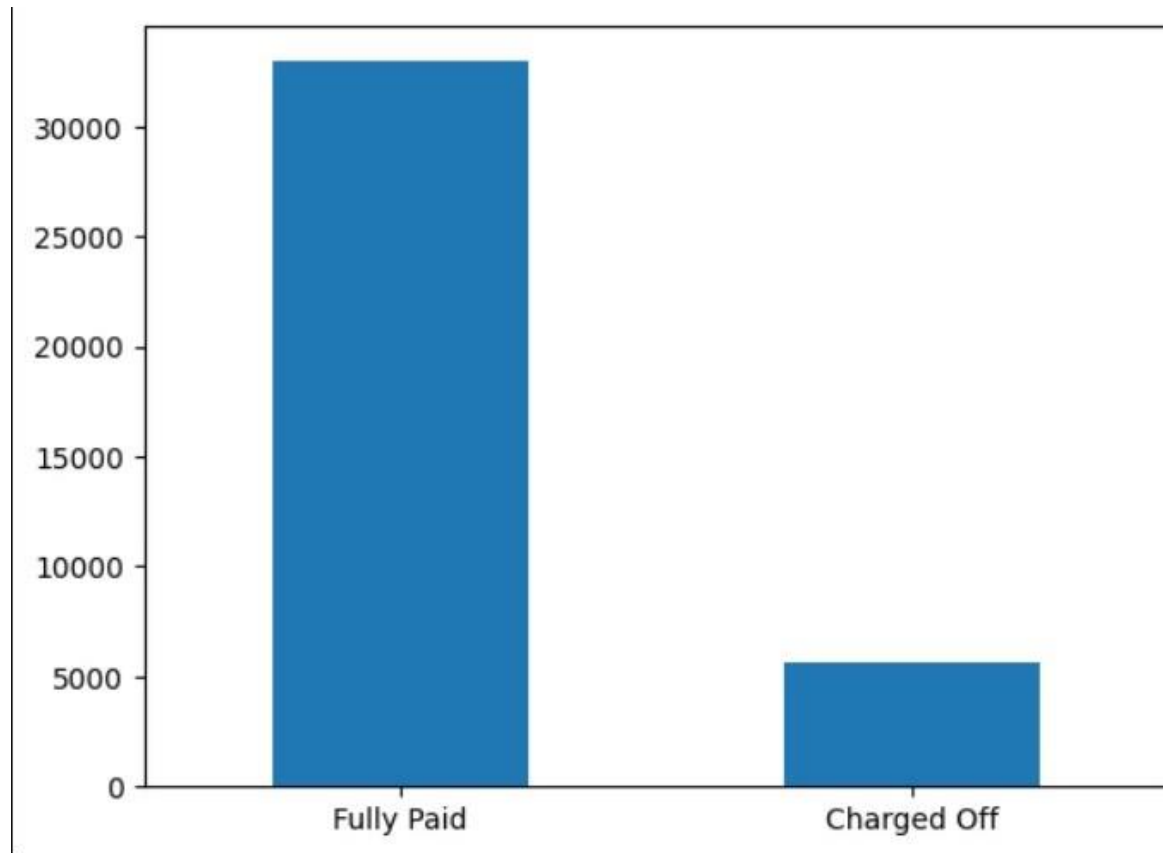   - Categorical Variable ('term')

Finding/Insight : Around 75% of the applicant apply loan for 36 month term period.

Data Analysis

1. Univariate Analysis
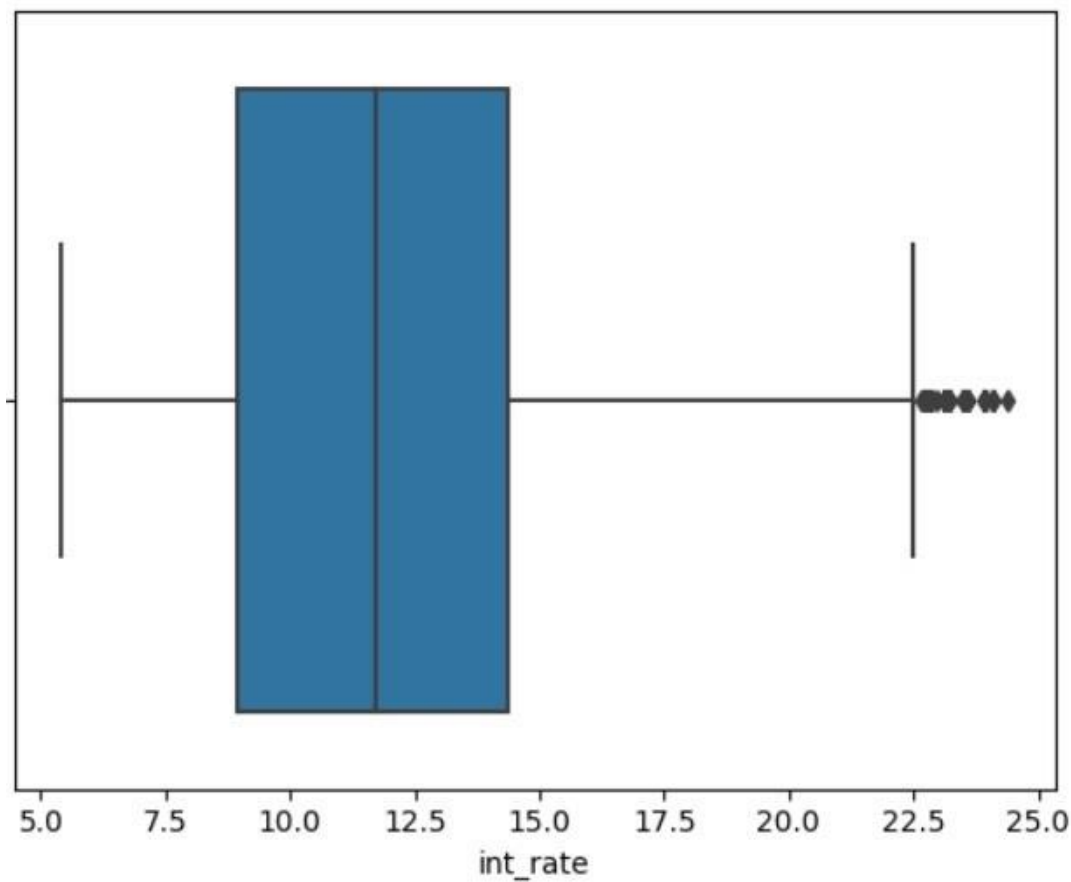   - Categorical Variable ('loan_status')

Finding/Insight : 14.5% of the loan borrower Charge off.

Data Analysis

1. Univariate Analysis
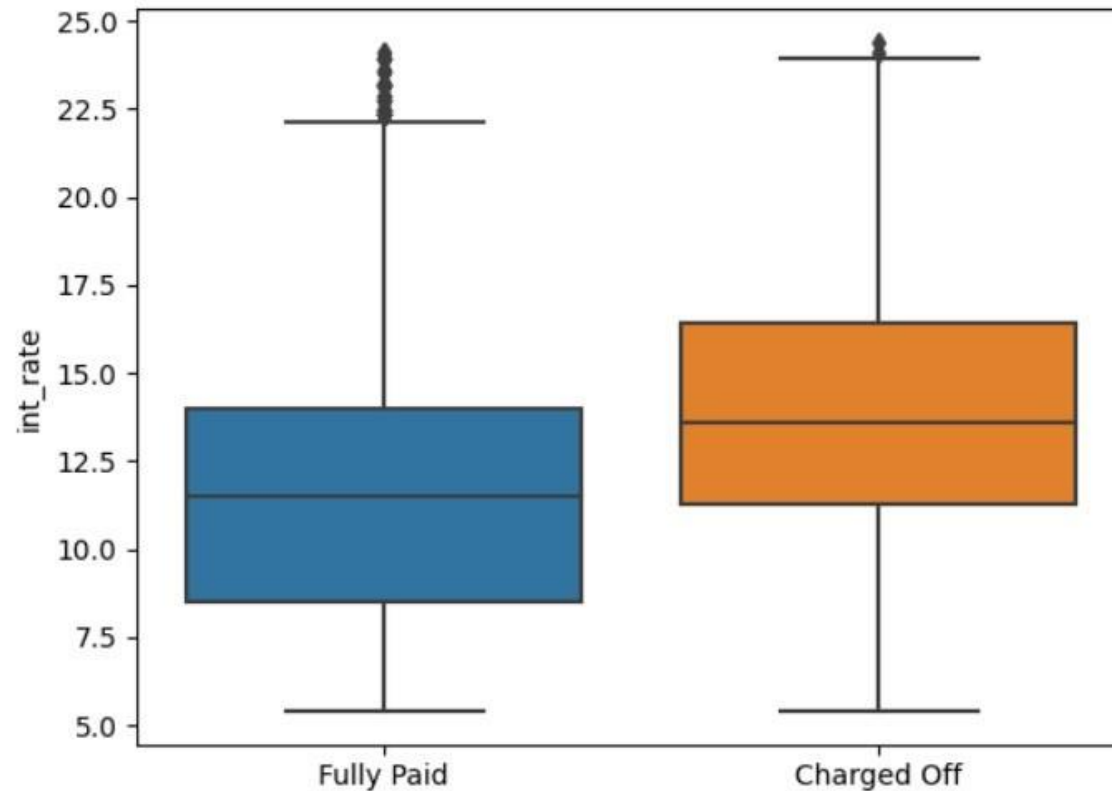
   - Numerical Data Variable ('loan_amnt')

Finding/Insight : Most of the interest rate distributed between 8.9% to 14%.

Data Analysis

1. Bivariate/Multivariate Analysis
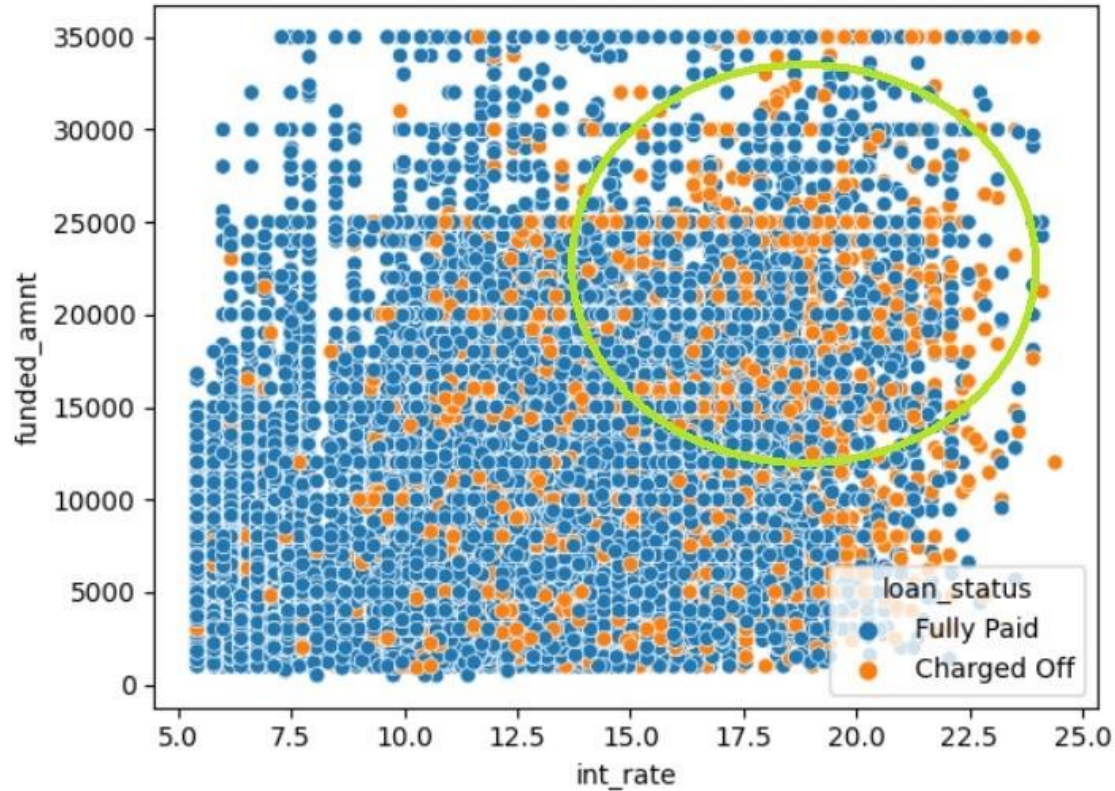   - Categorical Variable ('loan_status') vs Numerical ('int_rate')

Finding/Insight : Applicants who borrow the loan on int_rate of 14% to 17% has high probability to Charged off.

Data Analysis

1. Bivariate/Multivariate
   - Categorical Variable ('funded_amount') vs Numerical ('int_rate')
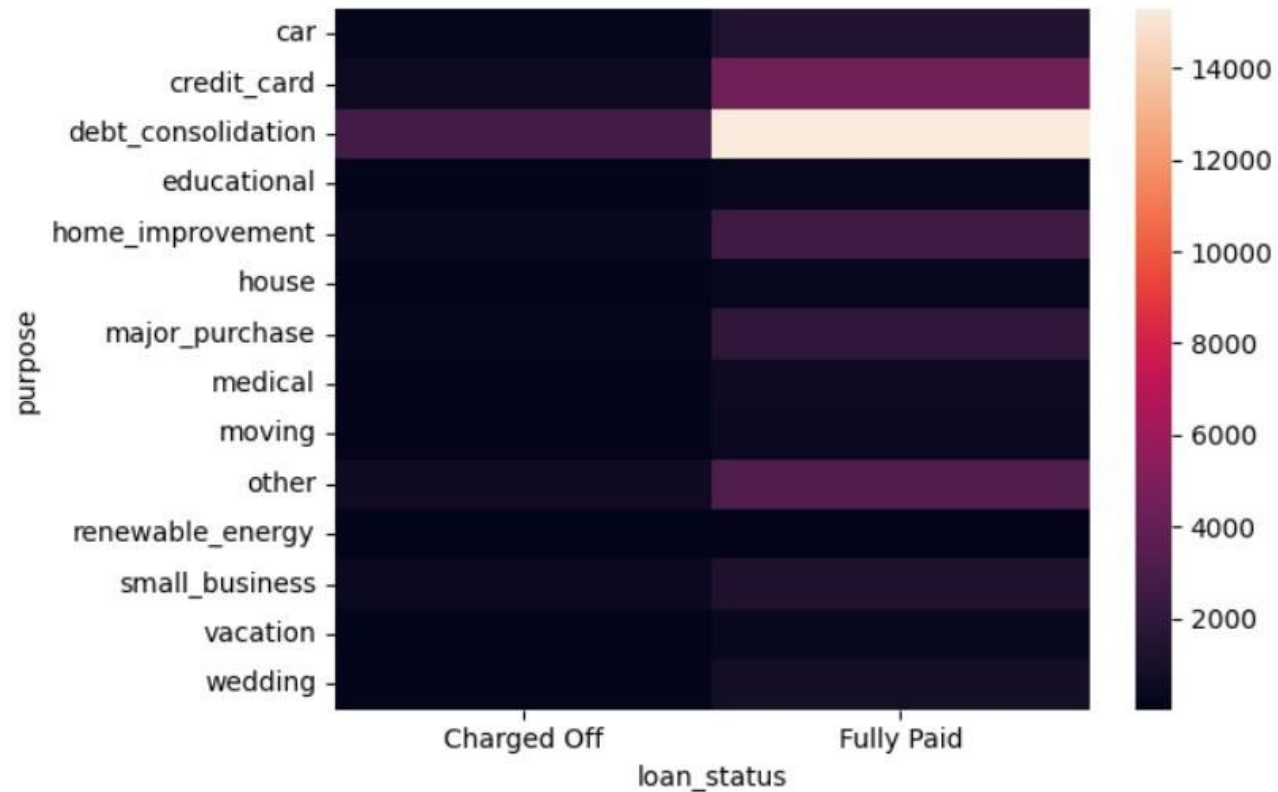

Finding/Insight : Applicants with funded amount between 15k-25k on int_rate of 17.5%-22.5% has high probability to Charge off.

Data Analysis

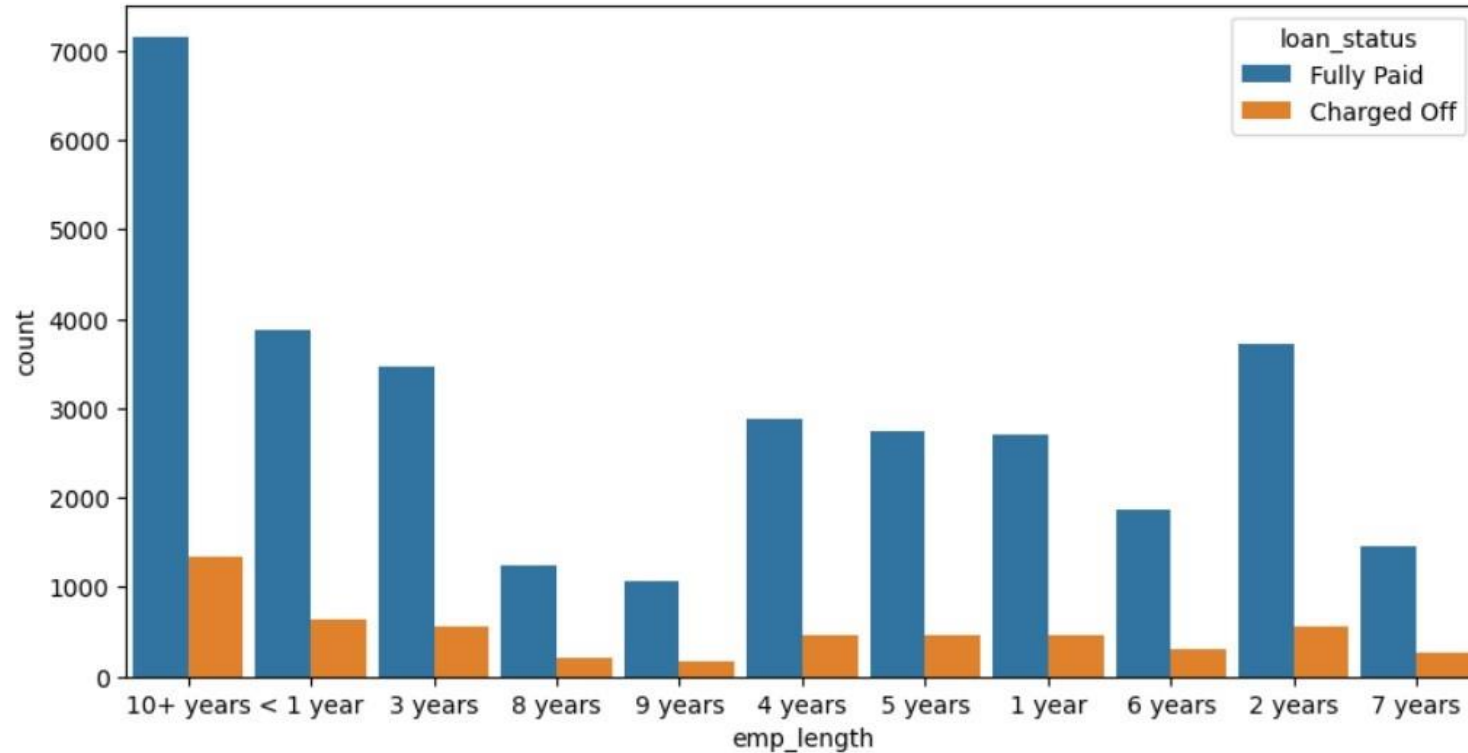1. Bivariate/Multivariate

    - Categorical Variable ('Purpose') vs Categorical Variable ("Loan_Status")

Finding/Insight : The number Applicants who charge off with purpose of debt_consolidation is high compare to others category of purpose.
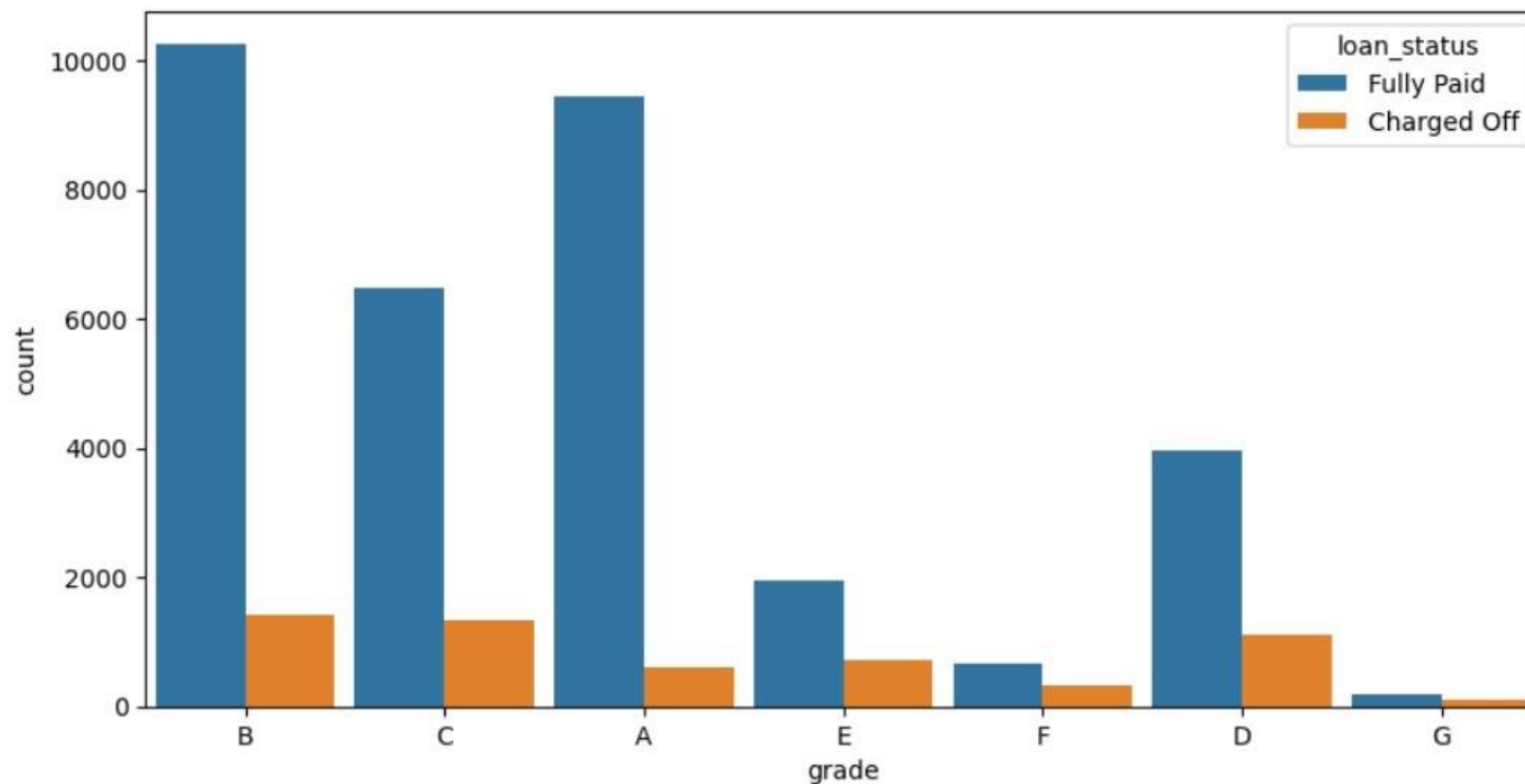
Data Analysis

1. Count plot of employee length with loan status

Finding/Insight : Applicants with <1 and 10+ years of experience highly probable to charge off.

Data Analysis

1. Count plot of loan grade with loan status

Finding/Insight : As we move from Grade A to D the charge off percentage get increases.

Conclusion

1. Applicants who borrow the loan on interest rate of 14% to 17% has high probability to Charged off.

2. The number Applicants who Charged off with purpose of debt_consolidation is high compared to other purposes.

3. Applicants with less than <1 and 10+ year of experience are highly probable to Charged off.

4. As we move from Grade A to D the charge off percentage get increases.

The end