



# LENDING CLUB CASE STUDY SUBMISSION

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# Lending Club Case Study

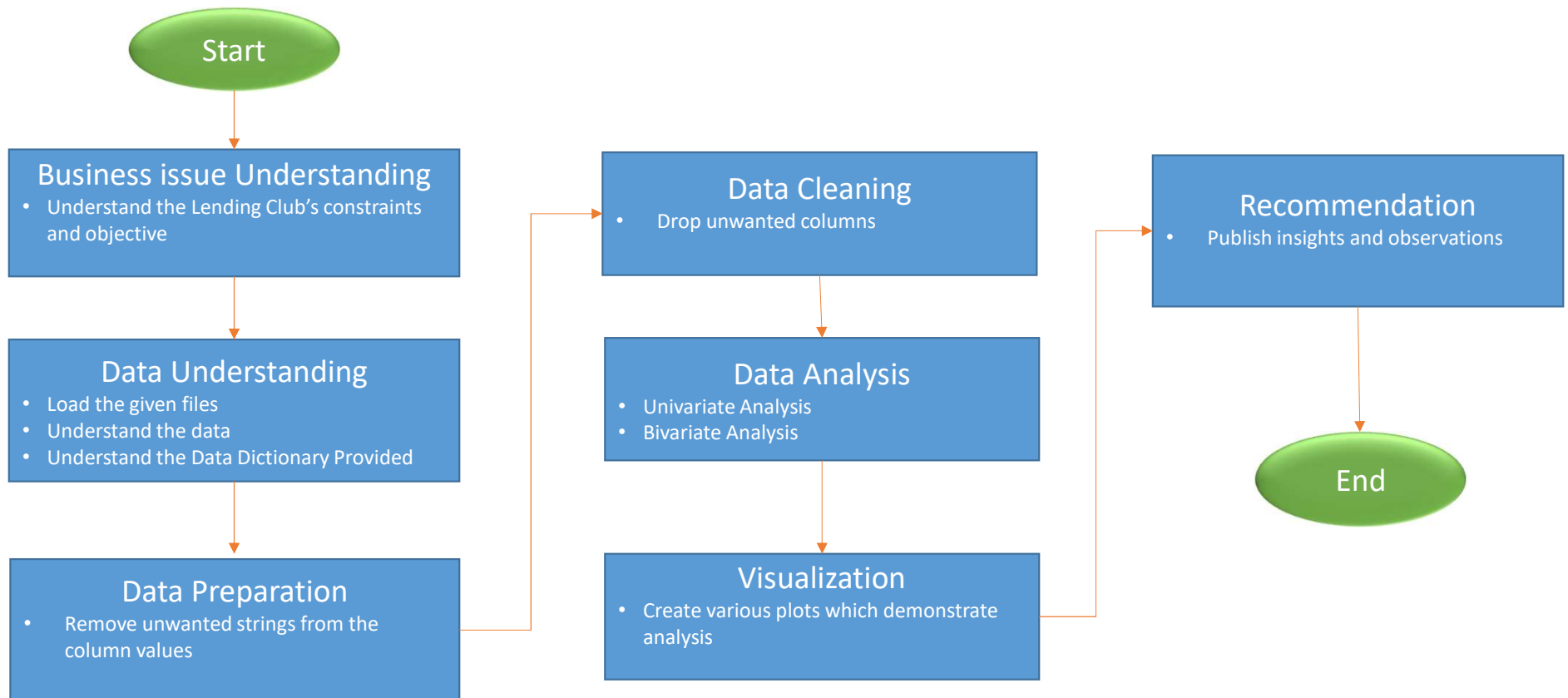
## Company :

- The Lending Club 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.

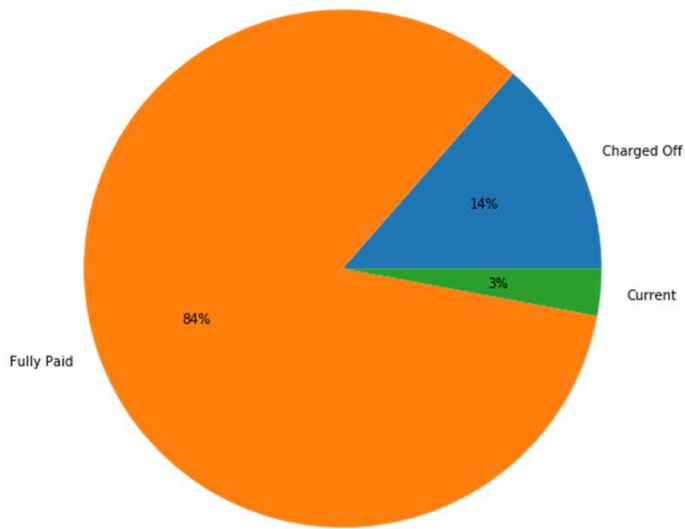
## Business Objective :

- How **consumer attributes** and **loan attributes** influence the tendency of default.
- 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.

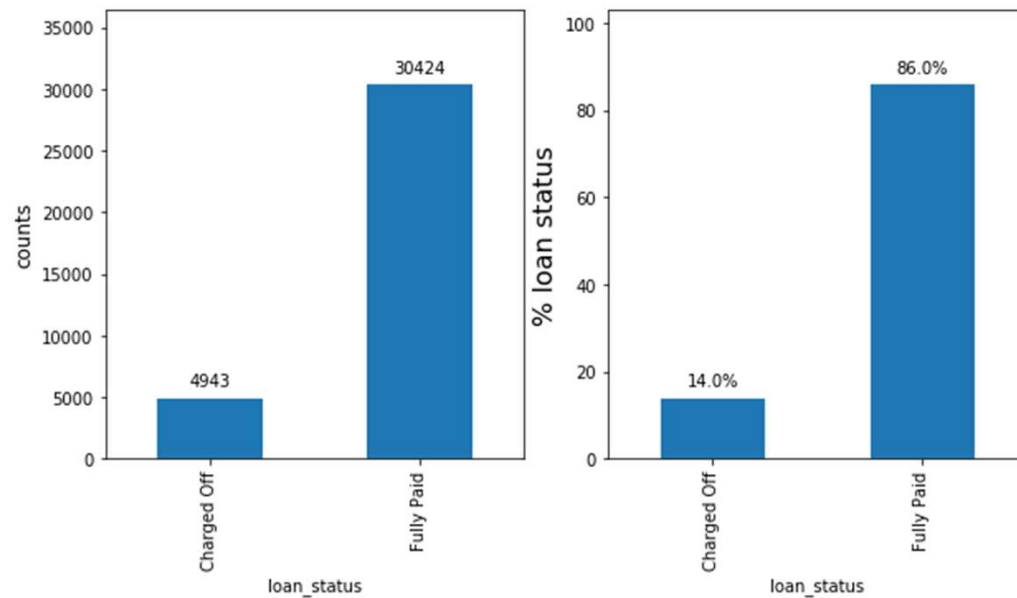
## Flow Chart



Percentage of loans fully paid, charged off and current

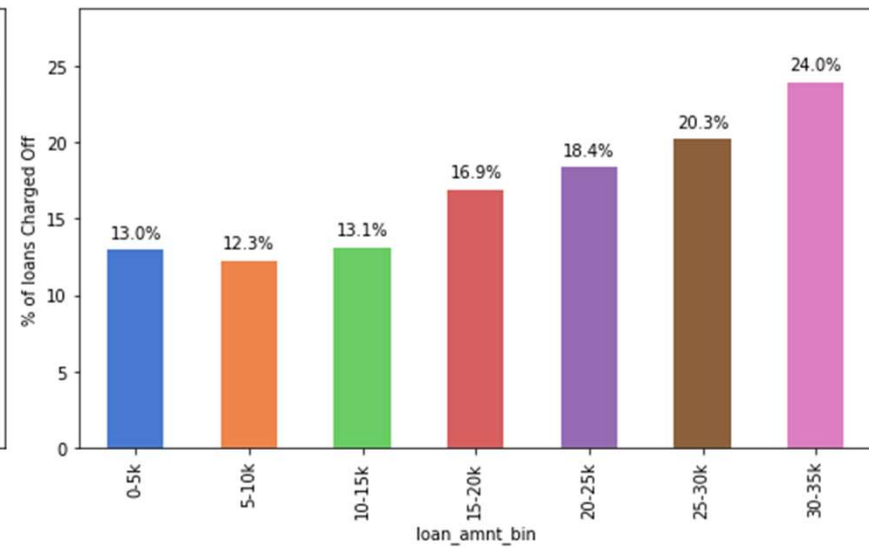
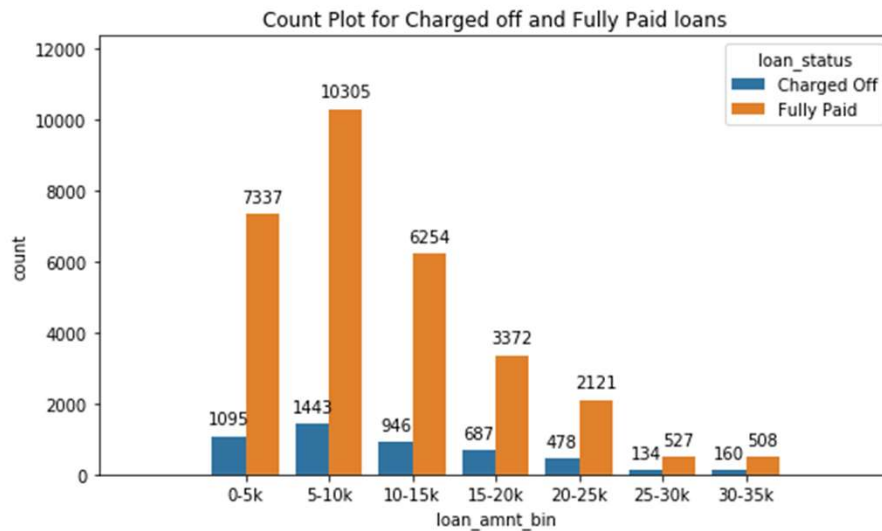


## Loan Status



- 14% loans are defaulted whereas 86% are fully paid (considering only Charged off and fully paid records)

## Loan Amount Analysis



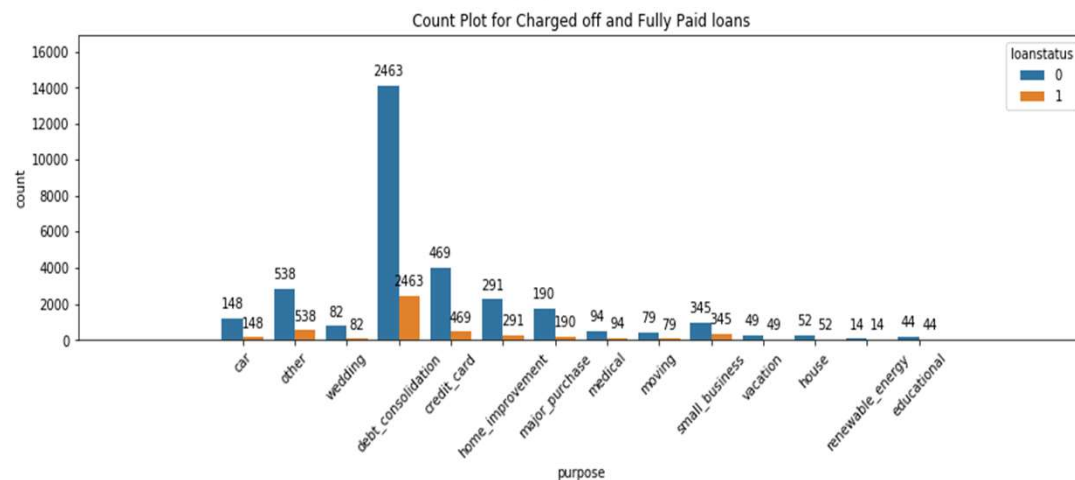
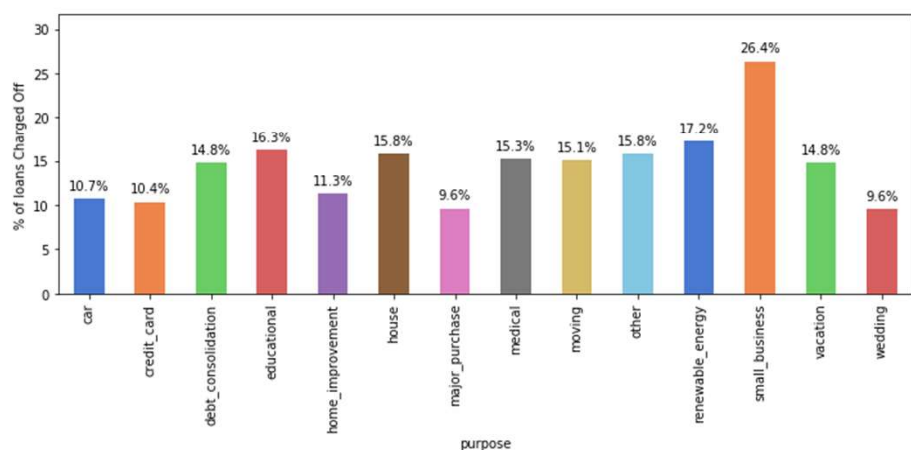
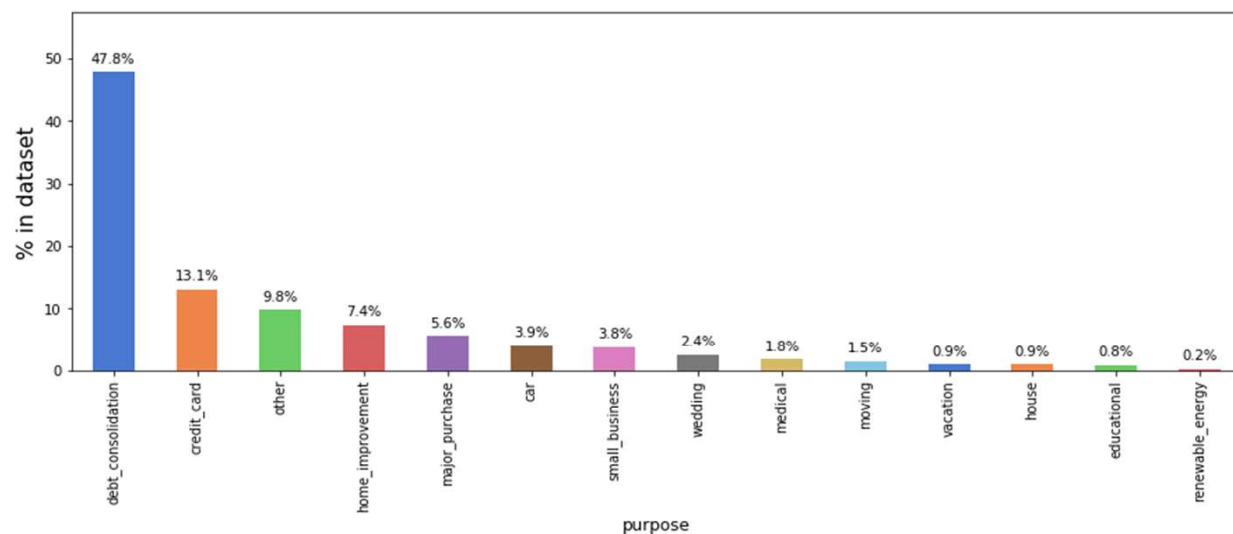
- Top 3 Charged off loan amounts are :
  1. 30-35K : 24% are defaults in this category
  2. 25-30K : 20.3% are defaults in this category
  3. 10-15k : 18.4% are defaults in this category
- The % of charged off loans increases substantially as we go up the loan bucket.



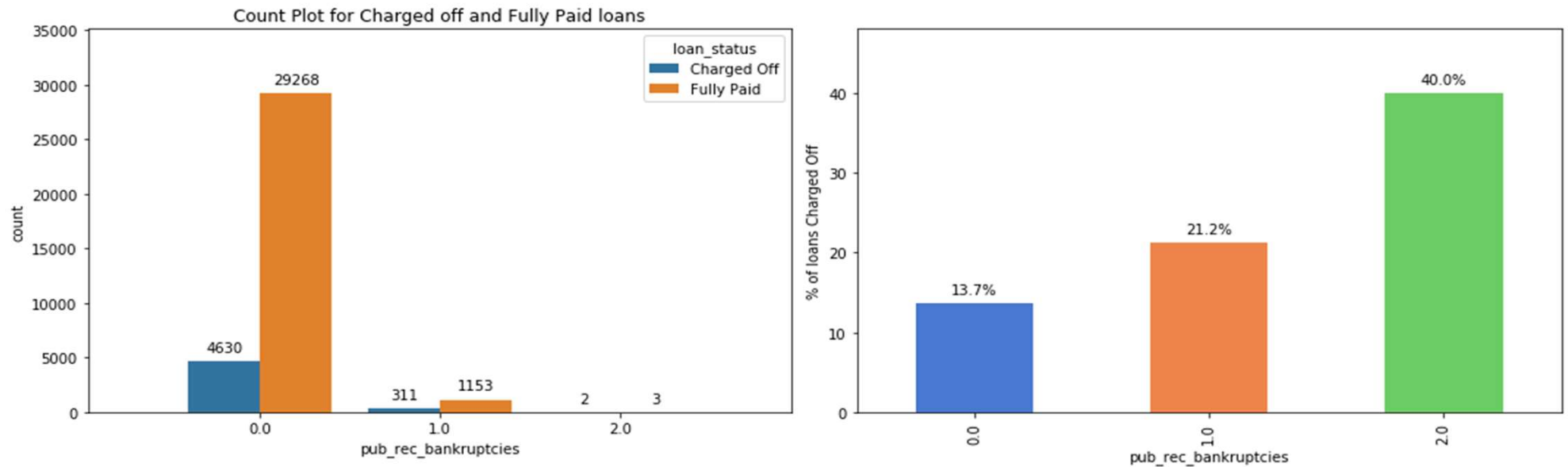
## Loan Purpose Analysis

- Loan for dept consolidations are 47.8% of overall loan population
- 26.4 % Small business are charged off out of charged off population
- 17% of the loans for renewable energy are charged Off
- 16.3% loans are charged off who took loan for educational purpose

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# Loan Analysis by bankruptcies record



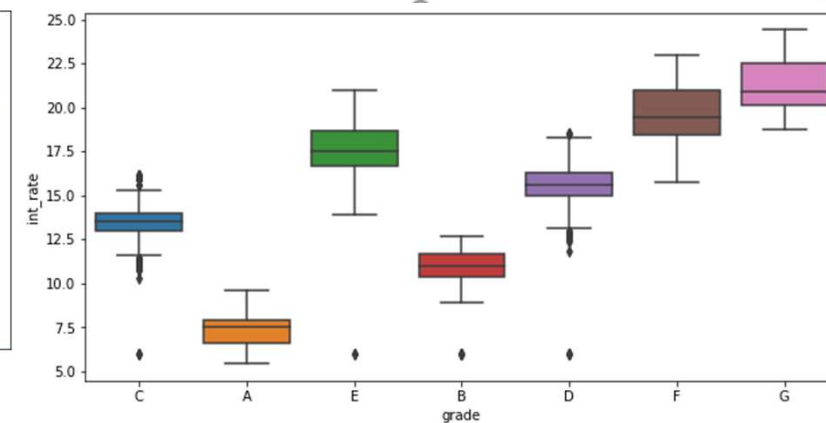
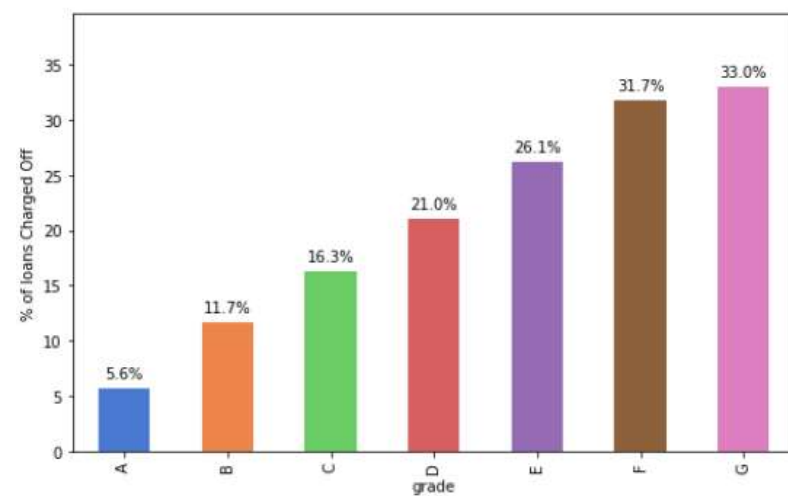
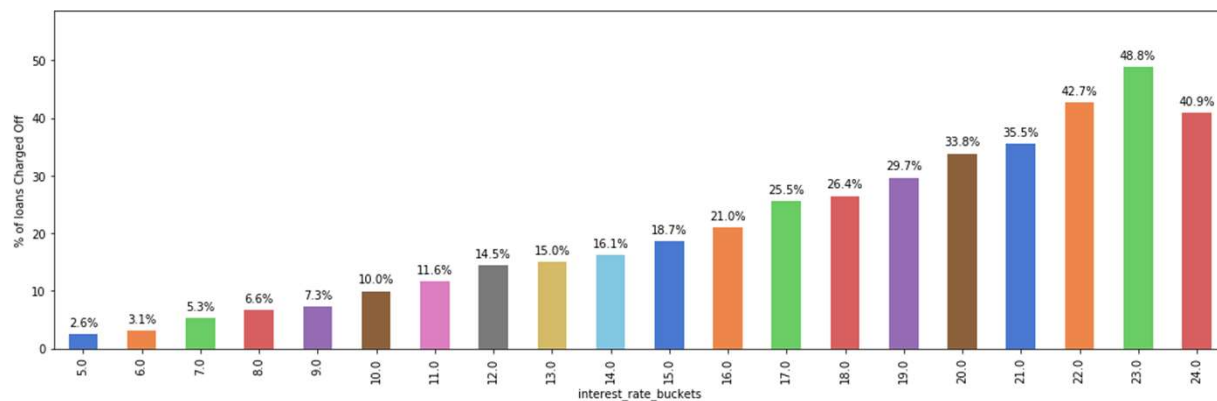
- 1.0 and 2.0 pub\_rec\_bankruptcies are not preferred for lending loans as chances of defaulters is more.



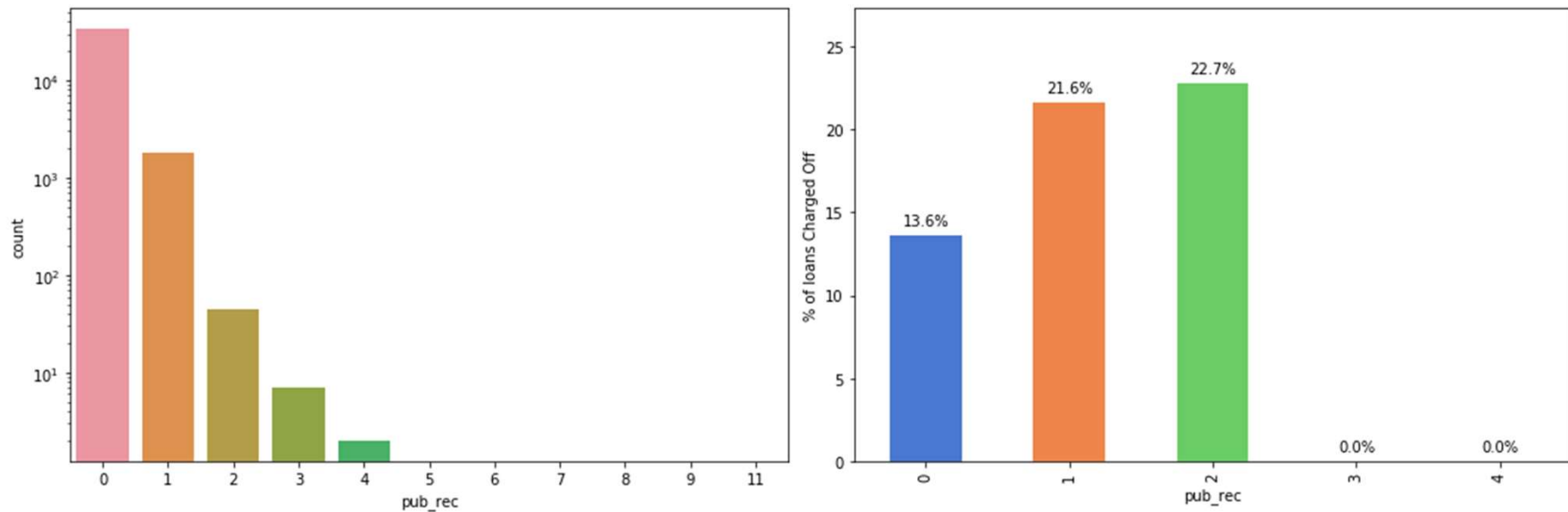
# Loan Analysis by Grade and Interest rate



- As the interest increases charged off percentage also increases
- Grade A and B loans are safe to approve loan .
- Grade D, E, F, G loans are risky for approving loan .
- Nearly 30% of all loans in Grades F and G see a default.
- As the grade decreases the risk increases

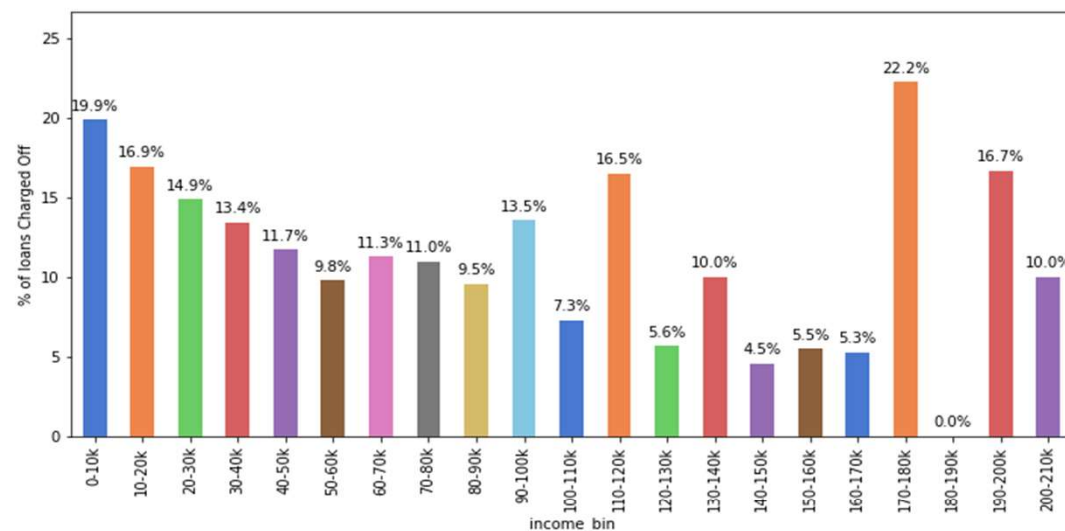
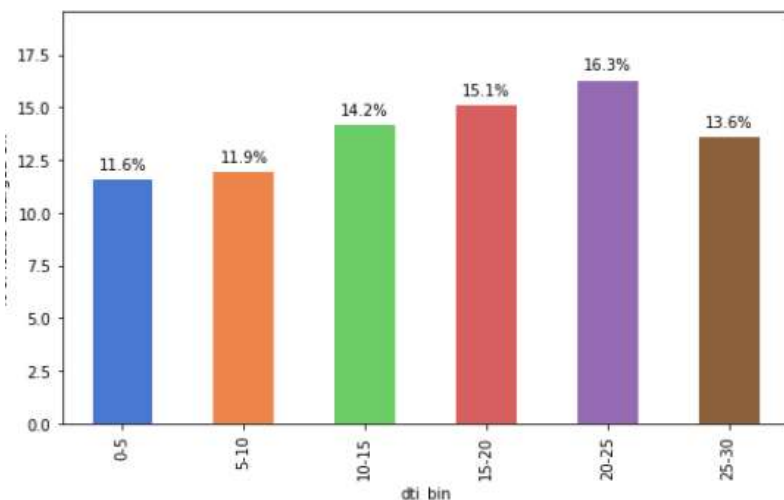




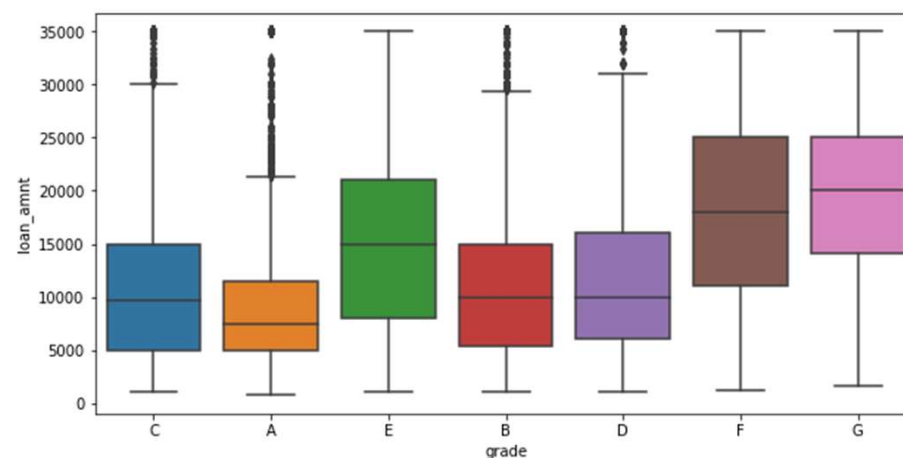


- Having even 1 derogatory record increases the chances of Charge Off significantly.

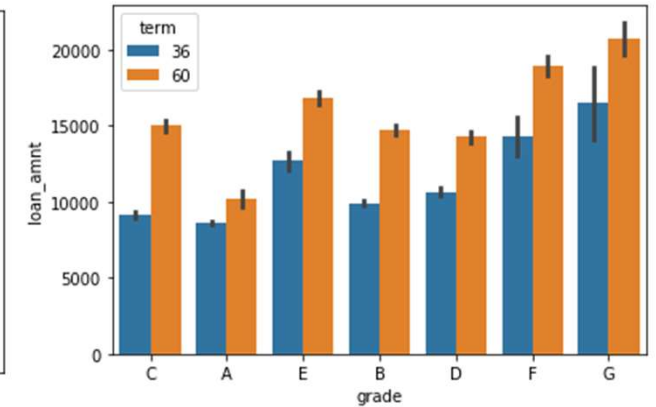
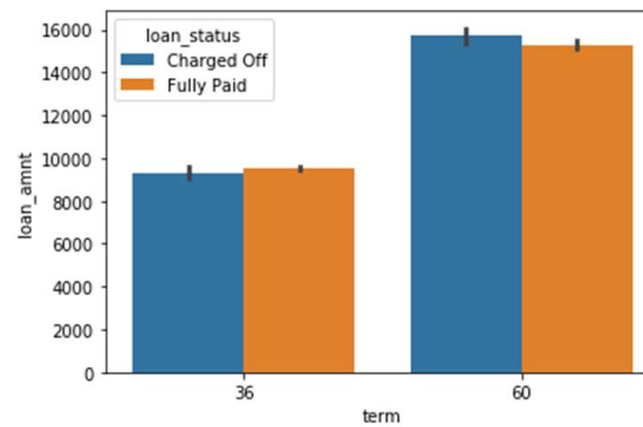
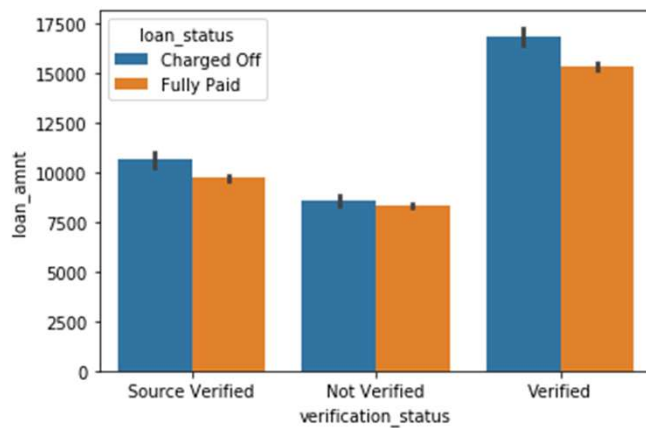
## Analysis on various factors



- Higher the dti higher the chances of loan being Charged Off
- The charged off percentage is more for people having annual income in range 170K-180K
- Higher loan amounts are approved for lower grades



## Analysis on various factors



- Higher loan amounts are Verified more often.
- Higher loan amount are associated with longer terms and see higher Charged Offs.
- Higher loan amount are associated with lower grade and for longer tenure.



# Recommendations

- Minimise the loan approvals for the small businesses or increase the scrutiny to reduce the defaulters.
  - Do not approve higher loan amount to lower grade for longer tenure.
  - Stop approving loans for applicants with prior bankruptcy history.
  - Approve more loans for applications having zero record bankruptcies
  - Lending Club should take steps to verify applicant's income.
  - Lending club should avoid lending higher loan with lower annual income
  - Start charging higher interest rate for loans having dti greater than 20
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