



# LEADING CLUB CASE STUDY SUBMISSION

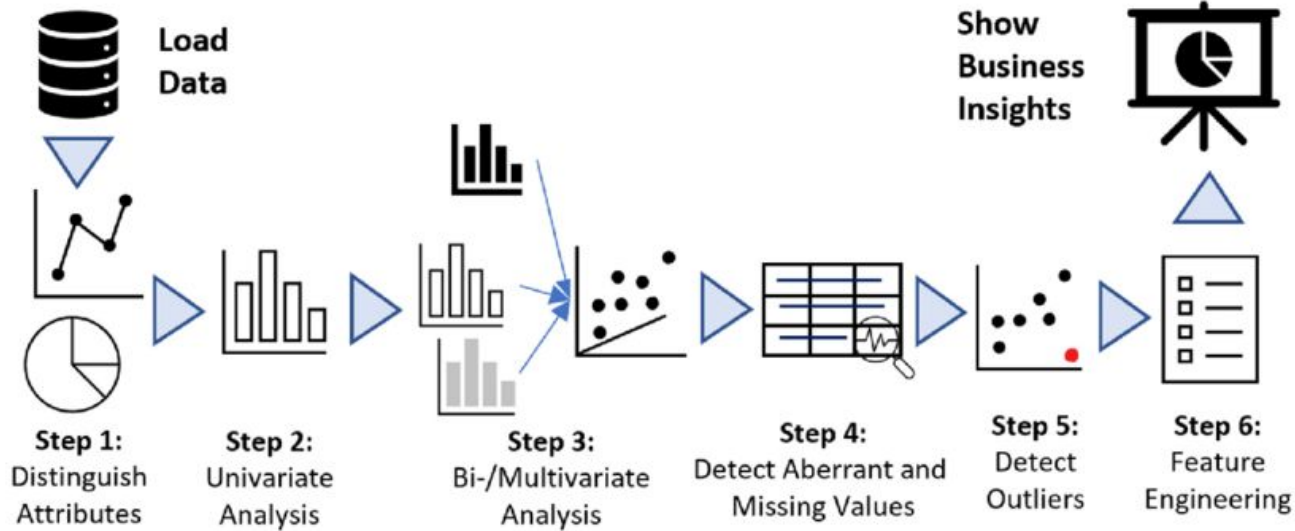
Janjanam syam koteswar



# Problem statement

- A business leading company wants to identify and reduce the risky borrowers
- Like most of the other leading companies banks want to avoid the risk borrowers and to know them the bank need some info of the following
- The company needs the driving factors behind loan default

# Problem Solving Methodology



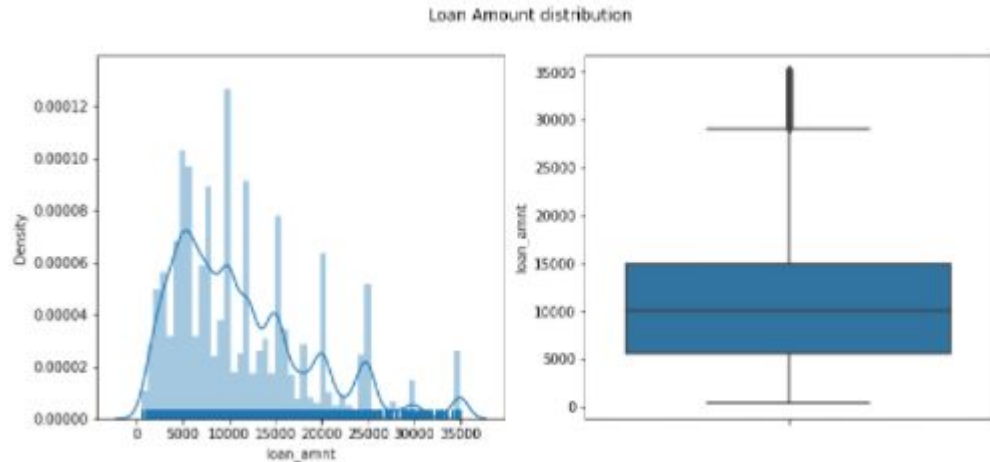
# Data cleaning steps

1. Remove duplicates or irrelevant observations
2. Fix structural errors
3. Filter unwanted outliers
4. Handle missing data
5. Validate and QA

# Univariate Analysis

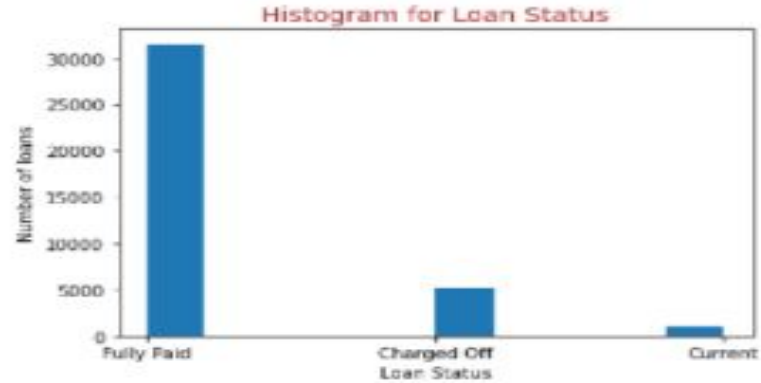
Loan amount:

more number of people took loan amount of 10000, and also median of distribution is 10000. And very few people took more than 30000 loan amount.

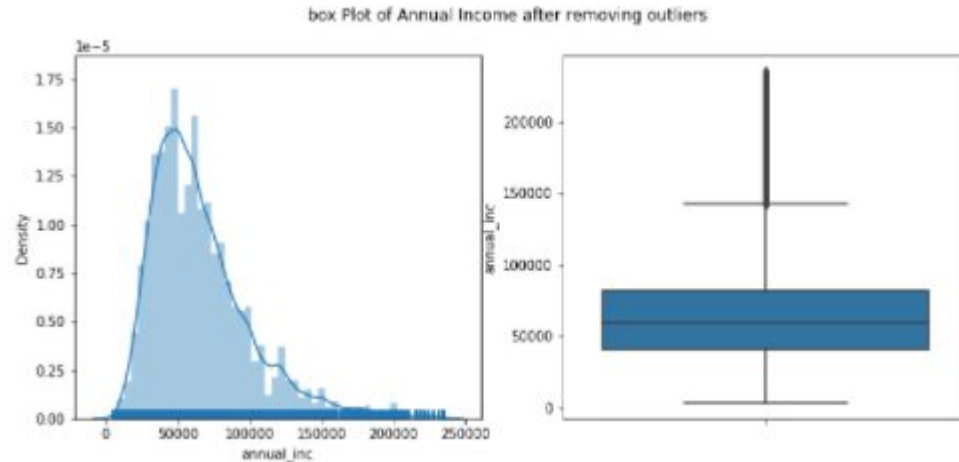


Loan status :

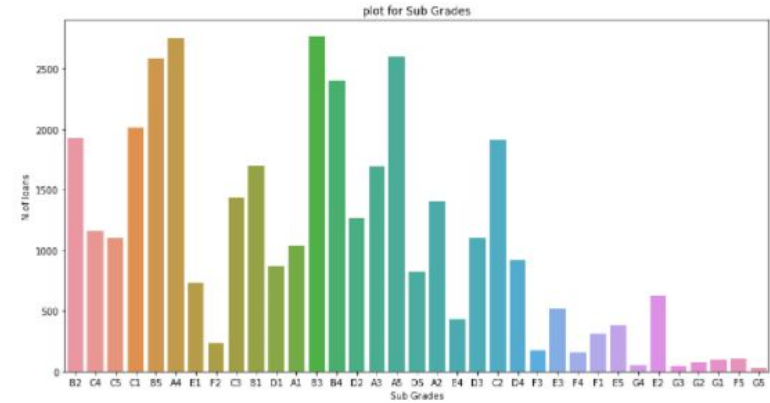
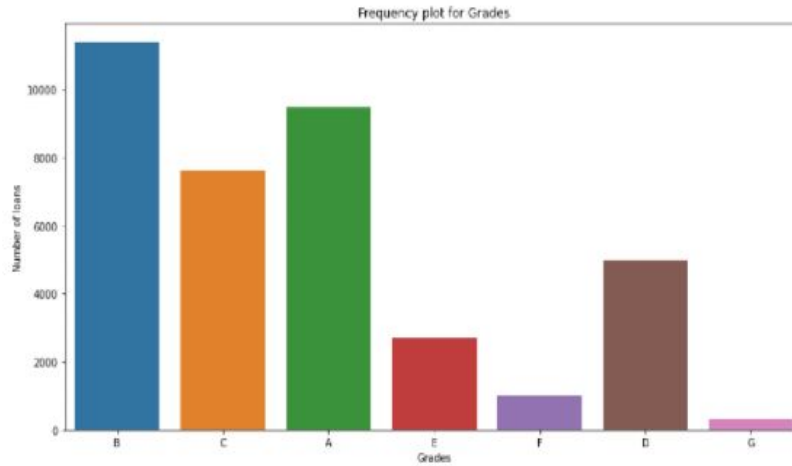
we can see that most of the charged off are under 5000



Annual\_income:



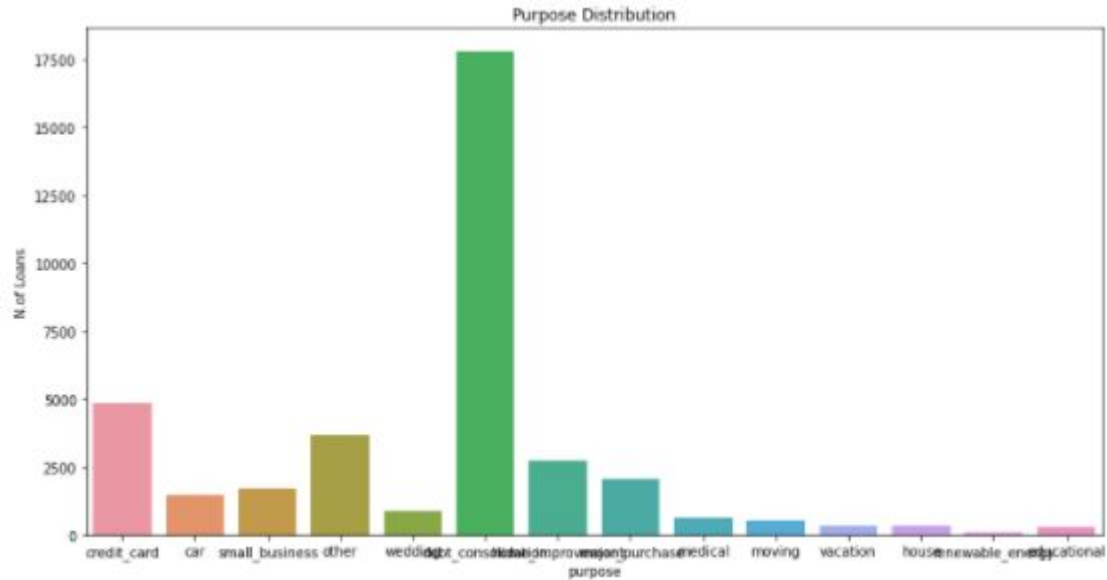
## Grade and subgrade



Majority of the loan given were of Grade B and Grade A  
High levels have more chance of loan given

Purpose:

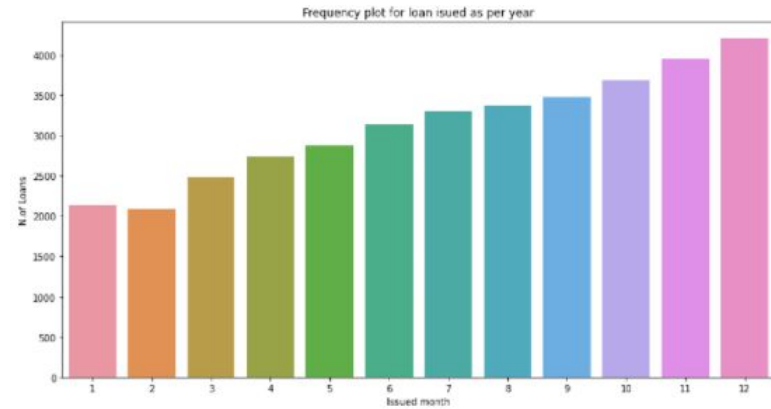
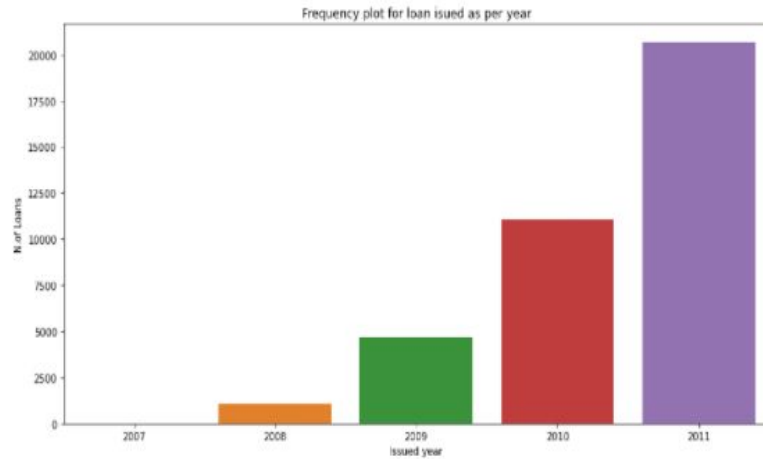
The loans taken are more on  
debt\_consolidation





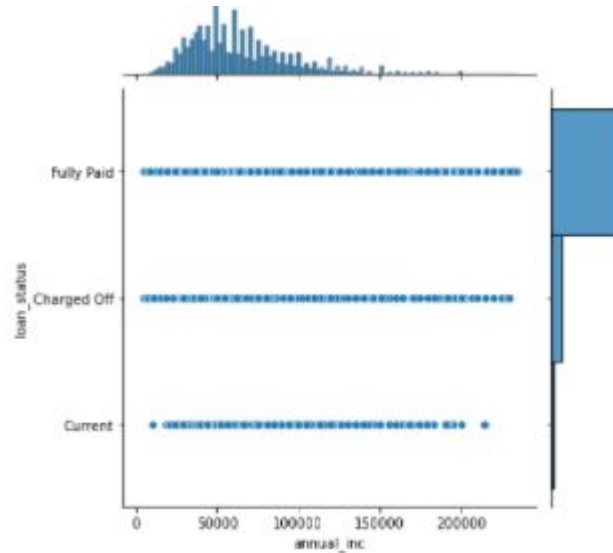
Issued date by year and months

There were linear increase in loan distribution



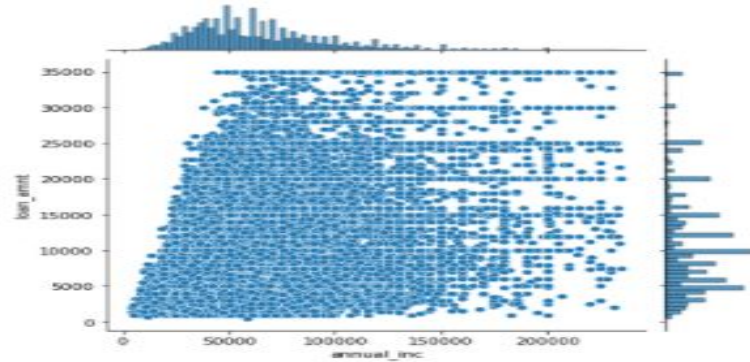
# Bivariate analysis

Annual\_income vs loan status



## Annual income vs loan amount

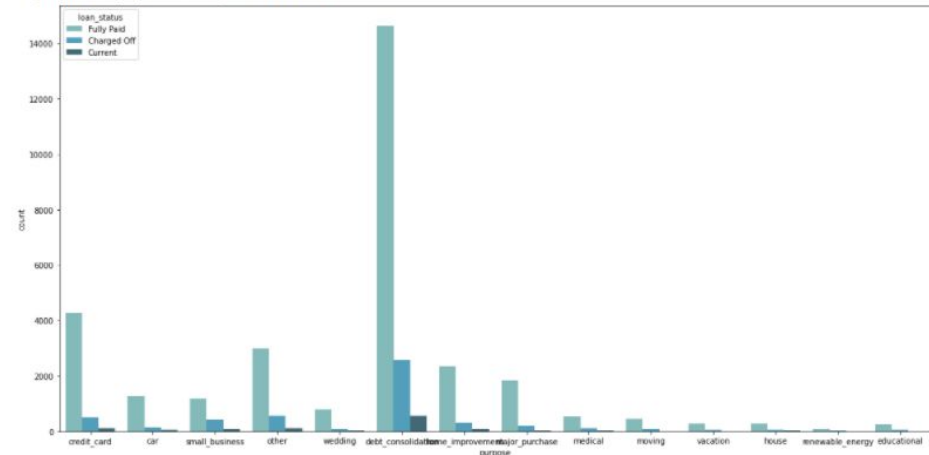
The loan amount taken is depend on the annual income



## Purpose vs loan status

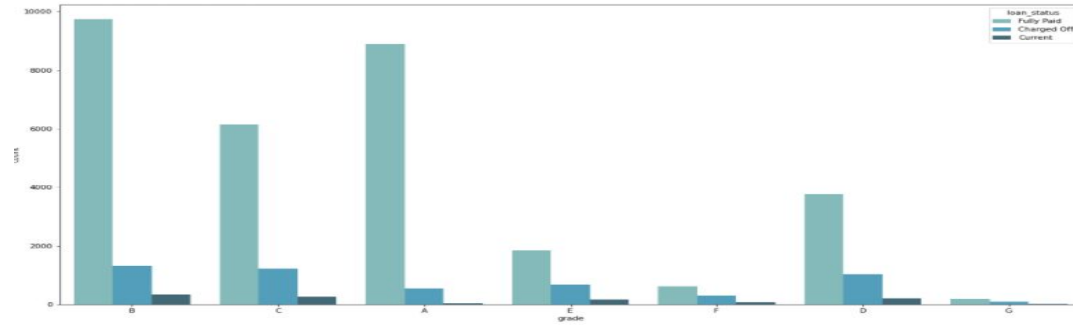
Most of the purpose is for debt consideration

<matplotlib.axes.\_subplots.AxesSubplot at 0x7fce420c790>

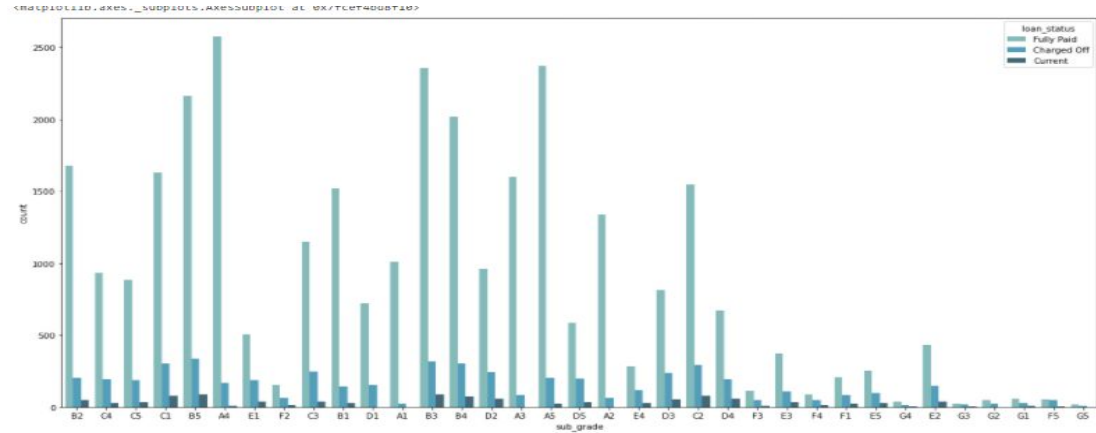


## Grade vs loan status

Grade B customer category is the one whose loans are getting approved

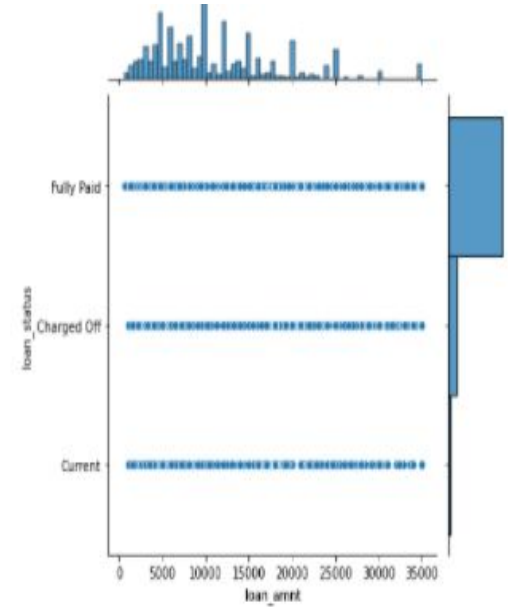
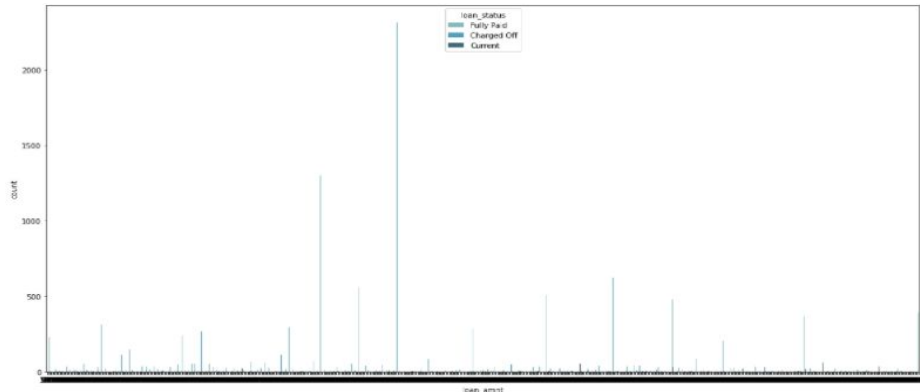


## Subgrade vs loan status



## Loan amount vs loan status

Customer whose income is either not verified or just verified are more prone to being charged off



# Observations and conclusions

1. Low grade loans have high tendency to default. Grading system is working as expected.
2. Customers with home ownership mortgage are the top most applicants
3. Average loan amount is around 10K
4. Customers applying loan most of them comes under debt consolidation
5. When the purpose is debt consolidation check application thoroughly as it has high tendency to default
6. Driver variables:
  - a. interest rate
  - b. Annual income
  - c. Loan amount
  - d. Fund amount
  - e. Purpose
  - f. Grades
  - g. subgrades