

# Lending Club Case



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# Objective

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.

Objective is to identify risky borrowers and the driving factors behind loan default



#### Approach

Data Understanding

Getting the knowledge of all columns in the dataset using data dictionary

Suggestions

Identifying variables involved in the process of loan default and suggestions for reducing their impact

Data Cleaning

Handling null values and removing unwanted columns

Bivariate Analysis

Analyzing two variables for the purpose of determining relationship between them Univariate Analysis

Analyzing each column and plotting its distribution

Segmented Univariate Analysis

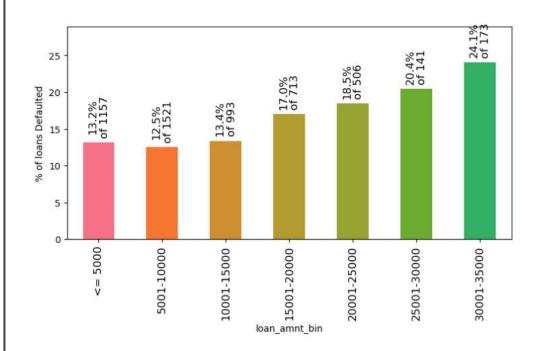
Analyzing continuous data with respect to categorical columns

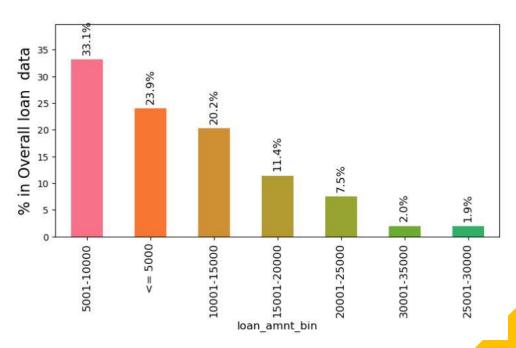


# Driving factors behind loan default



# Loan Amount

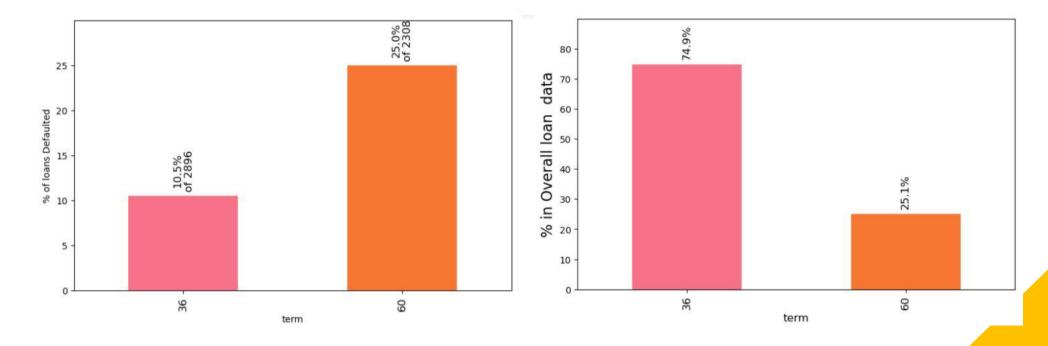




With increase in loan amount, default percentage also increase. Thus, the company is giving high amount of loans to low number of borrowers and should follow the same in future.



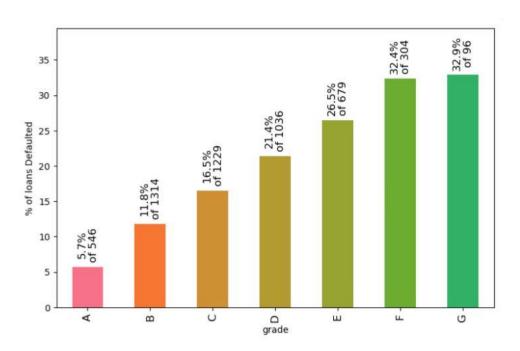
# UpGrad \_\_\_\_\_ Term of loan

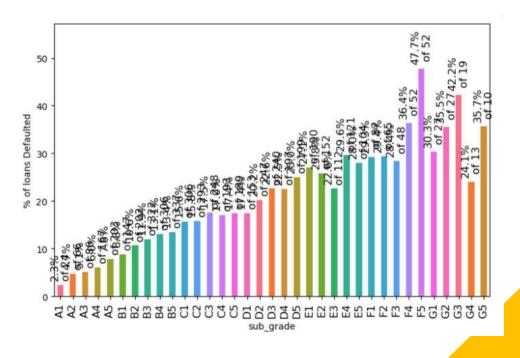


Loans given for 5 years have a high chance of default than loans given for 3 years. Company is already giving loan to low number of borrowers for long term. It should further refrain from giving high term loans.



#### Grades and Sub-Grades

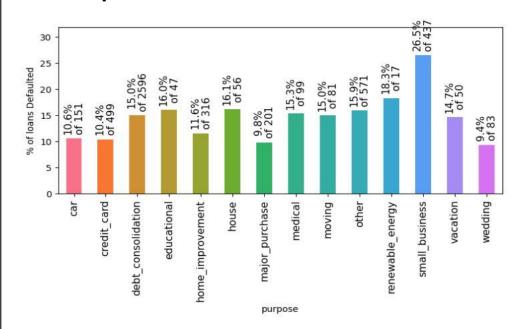


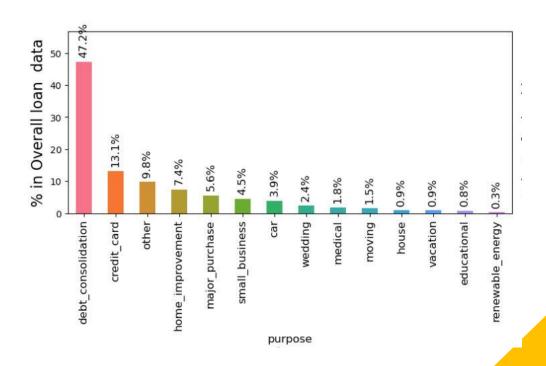


Rate of default is higher in case of lower grades which determines the accuracy of grading system of company. Thus, company should avoid giving loans to borrowers with lower grades and subgrades



### Purpose of loan

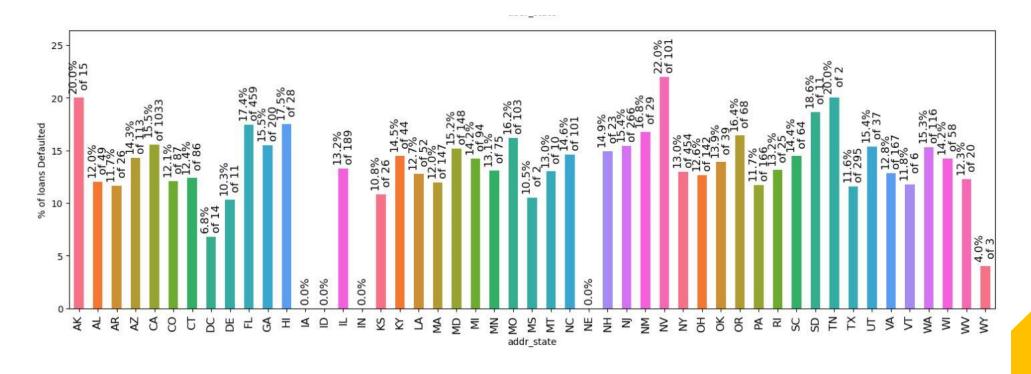




Rate of default is higher in case of loans given for small businesses and renewable energy. Thus, company should refrain giving these type of loans.



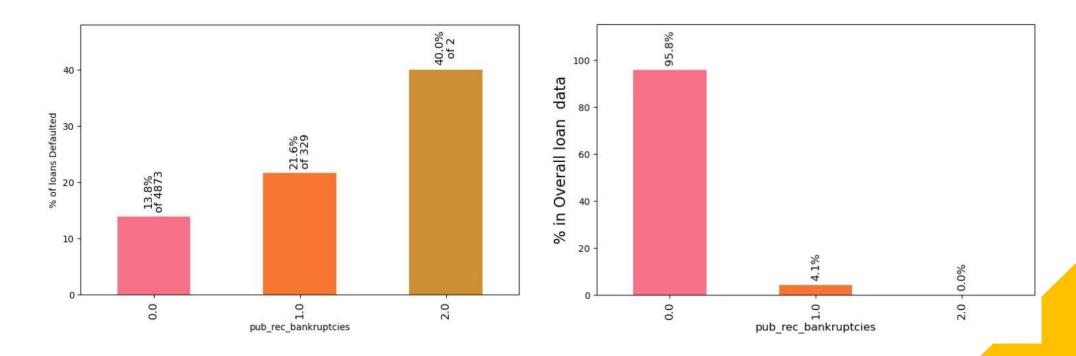
### States



Borrowers from NV, AK, TN has high chance of default whereas borrowers from IA, ID, NE have almost fully repaid their loans.



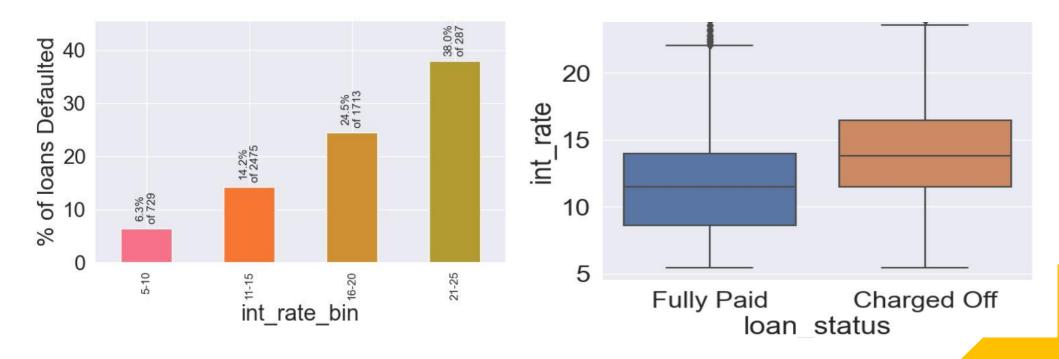
#### Number of Bankruptcies



Borrowers who have been declared bankrupt in past have a very high chance of default. Company should not give loans to borrowers with bankruptcy history.



#### Interest Rate



With an increase in interest rate, rate of default also increases, thus the company should not give loans to customers with bad credit history at high interest rates.



## Summary

Factors (loan amount, term of loan, grades, purpose of loan, states, bankruptcy history and interest rates) have high effect on rate of default.

Company should refrain from giving risky loans at high interest rates to borrowers with low credibility.

Loans given for purpose of small businesses, renewable energy should be taken care and proper checks needs to be maintained on such loans.

Loans for small period should be prioritized over long term loans.

Relationship/Credit
Managers should give loans
as per the grading system of
the company.

Borrowers with bankruptcy history should not be given loans.