



# Lending Club Case study

Team : Mohamed Basith  
Monika Dadhich

<https://github.com/MonikaDadhich/Lending-Club-Case>

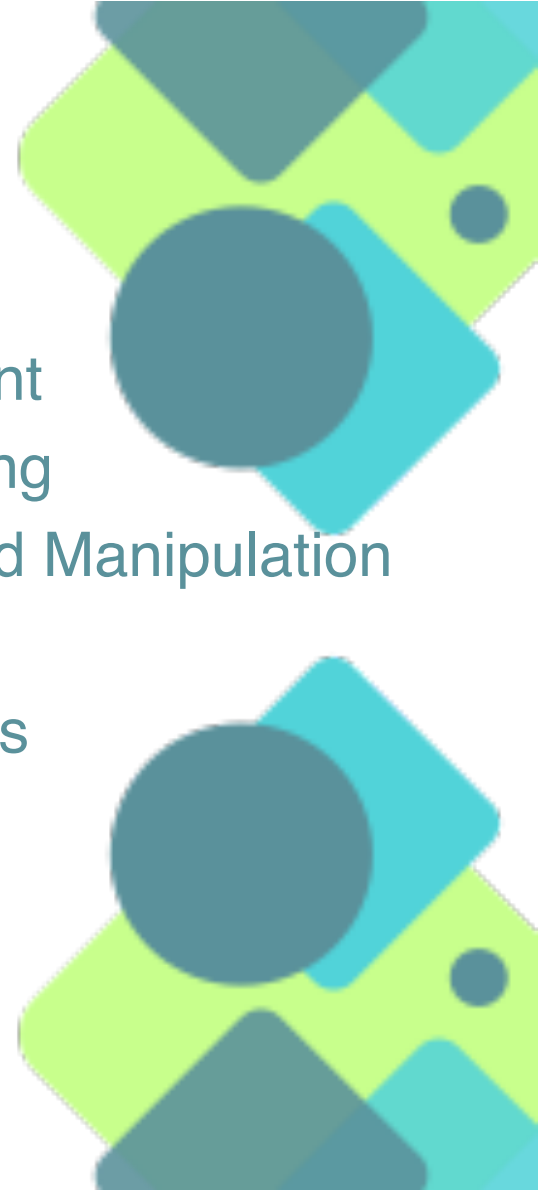




Lending Club Case study

# Agenda

- Problem Statement
- Data understanding
- Data Cleaning and Manipulation
- Data analysis
- Recommendations





Lending Club Case Study

# Our Team



Mohamed  
Basith

Monika Dadhich

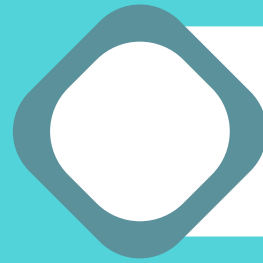




## Lending Club Case Study

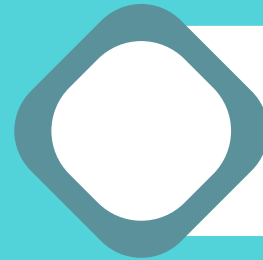
# Problem Statement

When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile.



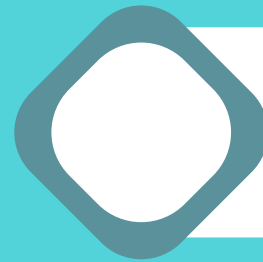
### Identify Patterns

which indicate if a person is likely to default



### consumer Attributes

Influencing the tendency to default



### Loan attributes

Influencing the tendency to default





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# Data Understanding

- loan\_csv dataset have been given
- This dataset has 111 columns representing various attributes of borrower's as well as its loan attributes
- We have total 39717 rows





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# Data Cleaning and Manipulation

- This is very important step where we need to do following :
- Removing all null rows
- Removing all NULL 54 columns
- Changed Data type of columns like : loan\_amnt, fund\_amnt etc
- Created derivative columns : loan\_chargedoff, loan\_fullypaid, own\_home etc
- Removed unnecessary data like % and 'months' from columns like : int\_rate, term etc



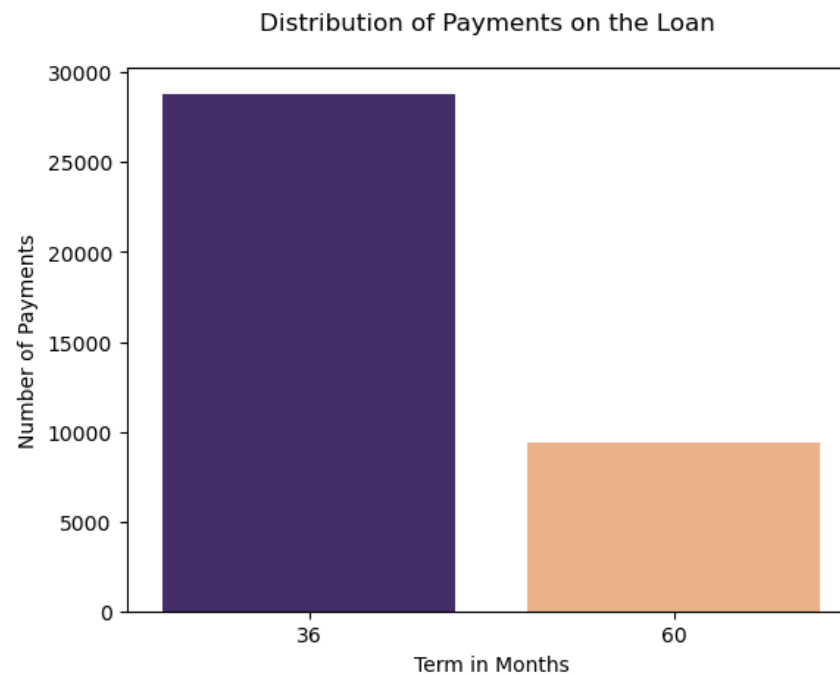
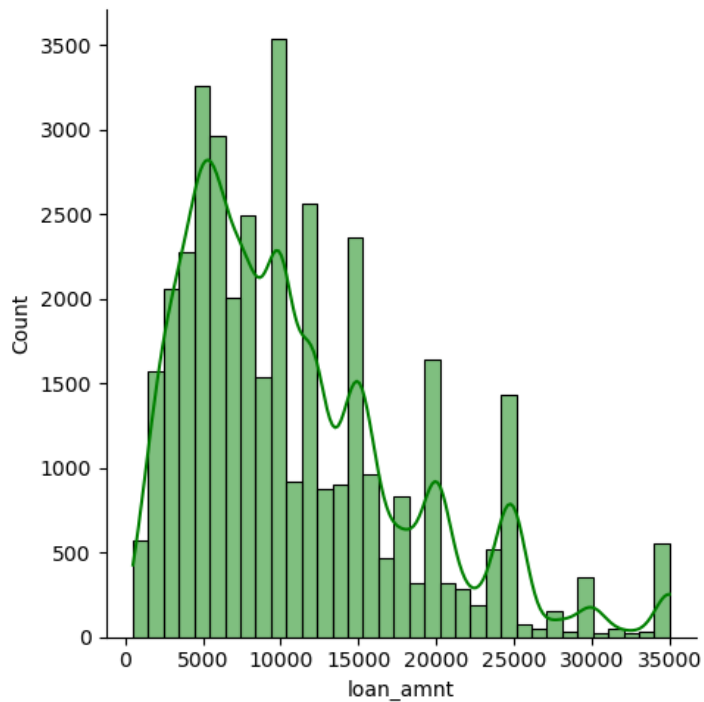


## Lending Club Case study

# Data analysis

- Univariate analysis

We will cover here few examples through graphs to derive insights from them





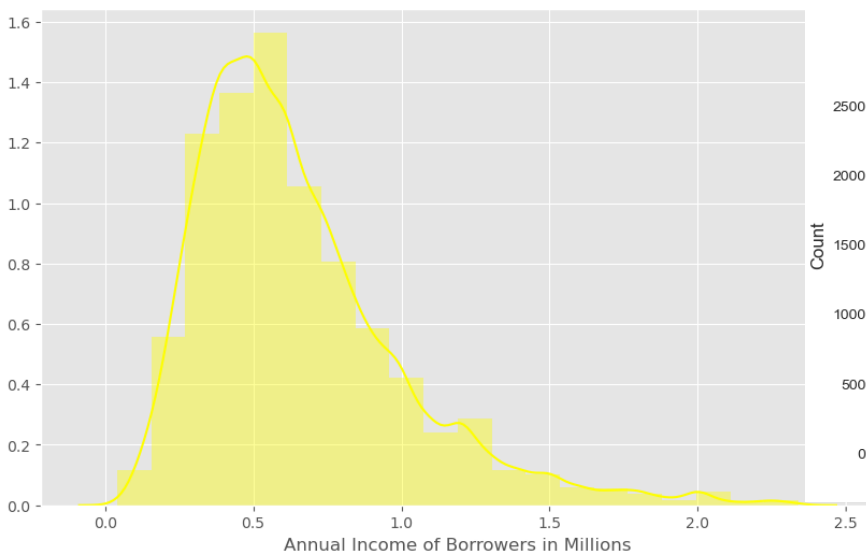
## Lending Club Case study

# Data analysis

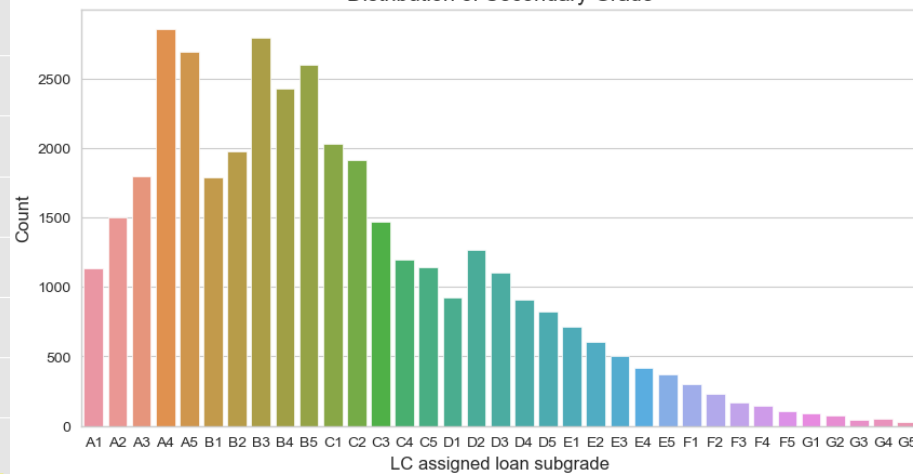
- Univariate analysis

We will cover here few examples through graphs to derive insights from them

Distribution of Annual Income of Borrowers



Distribution of Secondary Grade







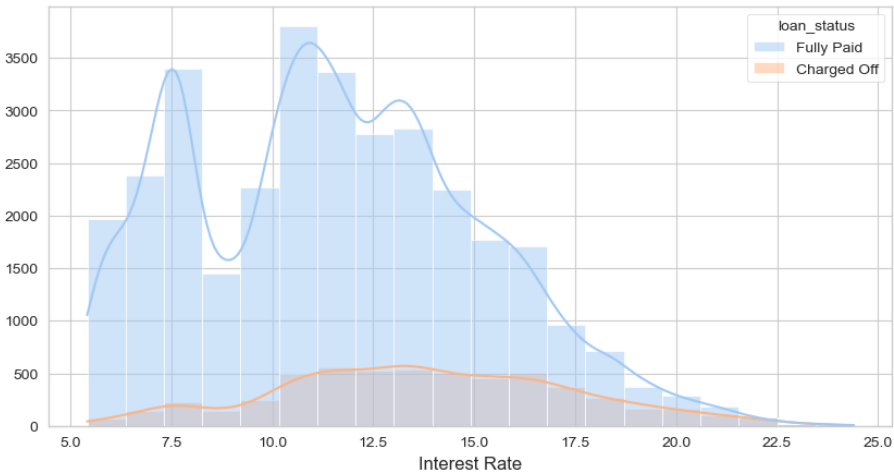
## Lending Club Case study

# Data analysis

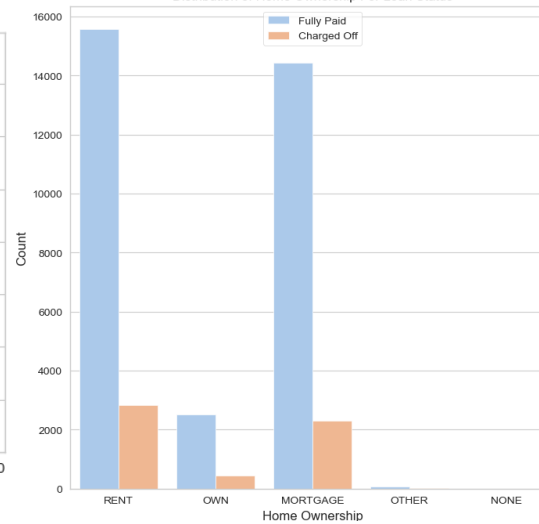
- Segmented Univariate analysis

We will cover here few examples through graphs to derive insights from them

Distribution of Interest Rate For Loan Status



Distribution of Home Ownership For Loan Status



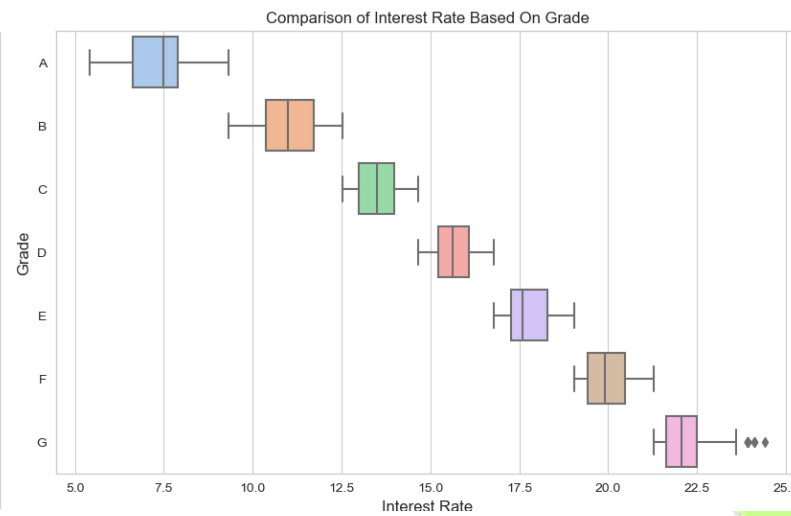
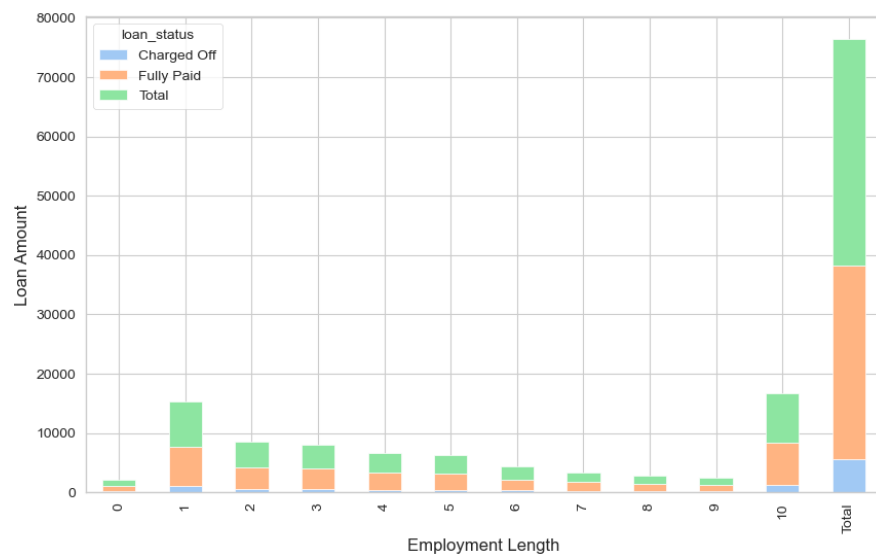


## Lending Club Case study

# Data analysis

- Bivariate analysis

We will cover here few examples through graphs to derive insights from them





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# Insights



1

Less Loan amount is like to get Fully Paid

2

Lesser the Interest Rate the chances of getting lesser Charge offs

3

Borrowers with lesser annual income likely to end up with high interest rate which could increase the chance of charge off

4

Launching Loans with lesser Term/tenure with attractively lesser interest will be a good product that will less likely end in charge off

5

Higher loan amounts tend to have higher interest rates which might end up in charge off



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# Recommendations

Factors which can be used to predict the chance of Charged off and avoiding the Loss:

- Annual income
- Verification Status
- Purpose
- DTI
- Grades
- Term
- Home Ownership





Thank You!

