



# Lending Club Case Study

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# Scope

Problem statement

Data set

Aim

Understanding of Case

Concept and Approach

Key Findings

Key Metrics

Conclusion



## Problem Statement

A consumer finance company that specializes in lending various types of loans to urban customers must decide for loan approval based on the applicant's profile. Two types of risks are associated.

1. Loss of business if applicant likely to repay loan.
2. Loss of finance if applicant NOT likely to repay loan.



# Dataset

1. Provided by Upgrad.
2. Past loan applicants' data and whether they 'defaulted' or not.



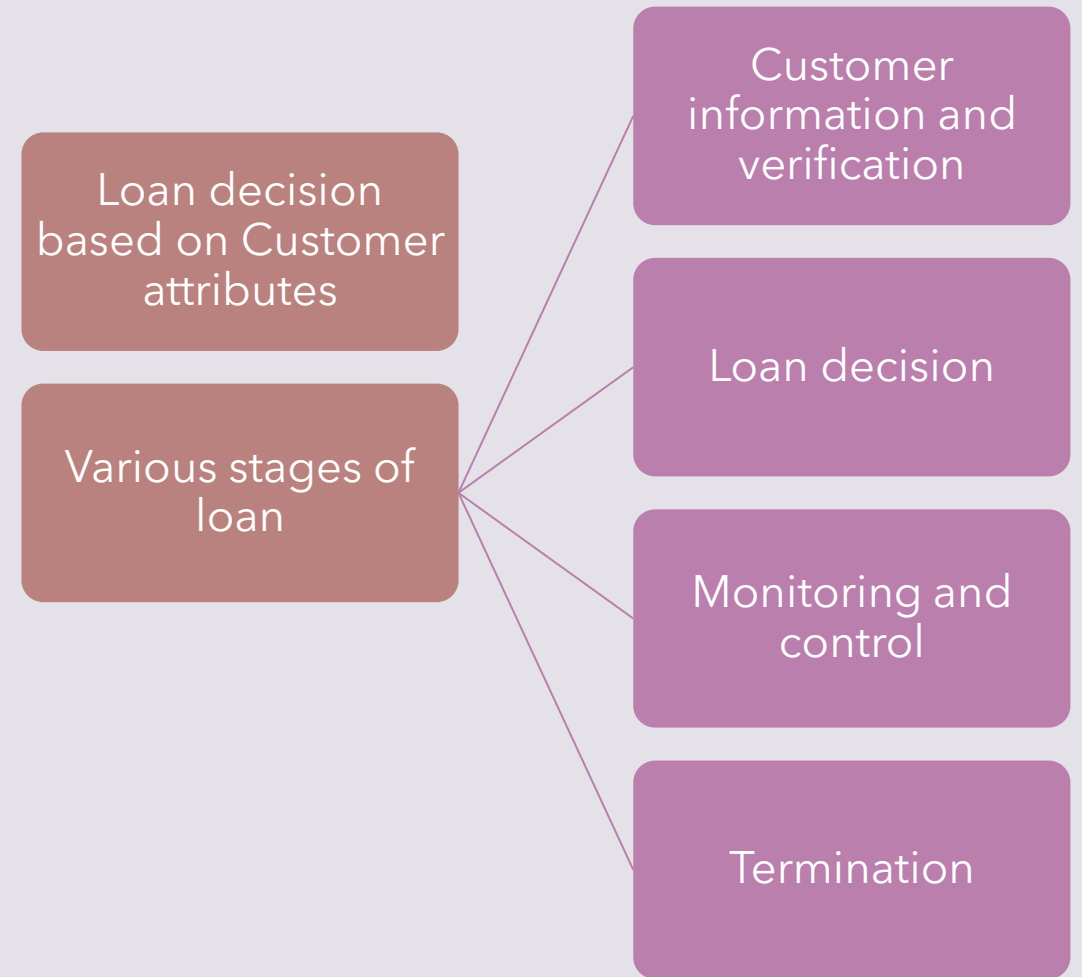
# Aim



To identify patterns which  
indicate if a person is likely to  
default.



# Understanding of Case





# Concept and Approach

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## Concept

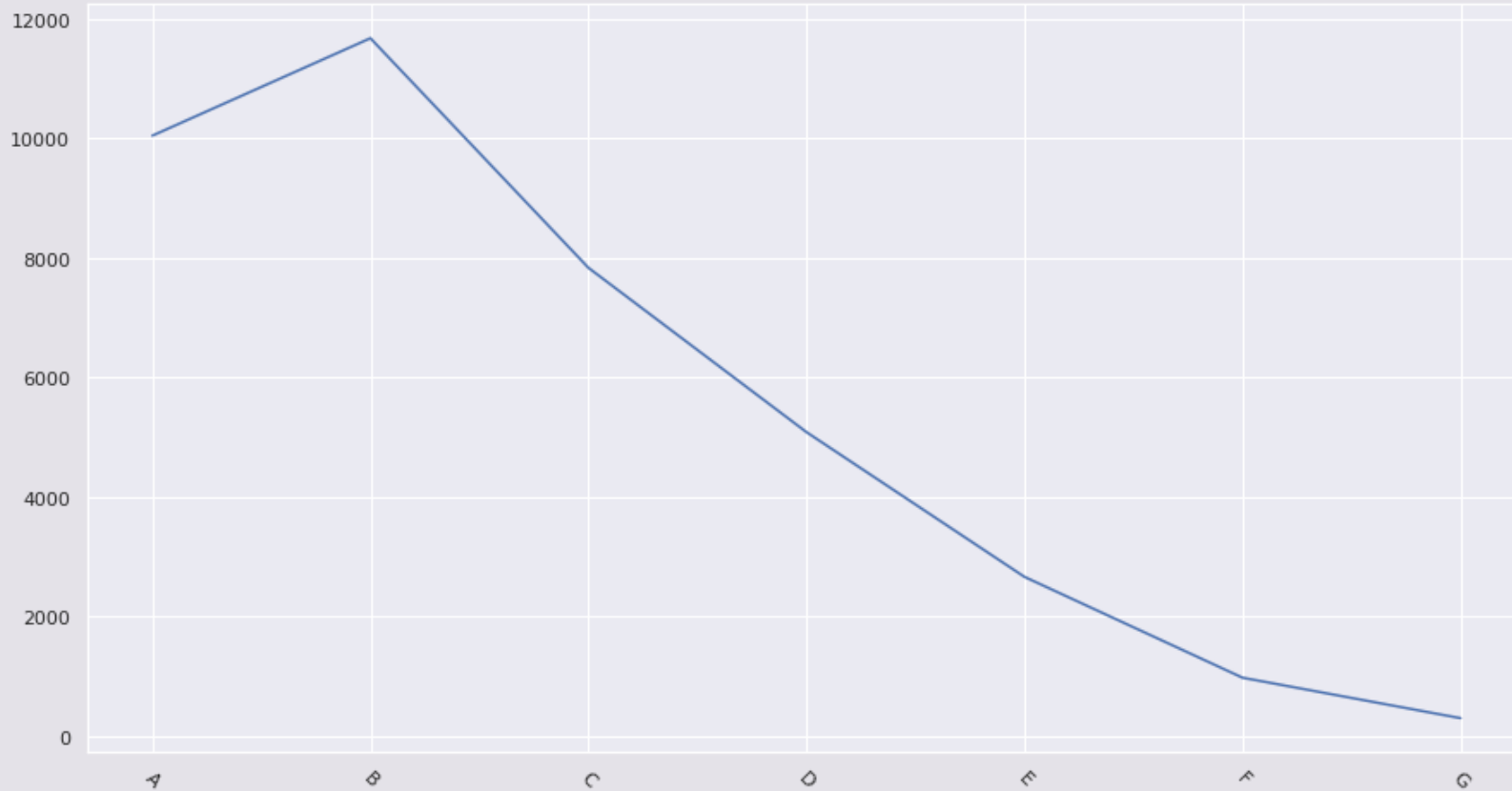
- Most important stage – decision stage.
- Most important attribute in this stage – instalment since all attributes considered to arrive at this information.

## Approach

- EDA
- Key indicator identification
- Metrics and identifying attributability



# Key Findings

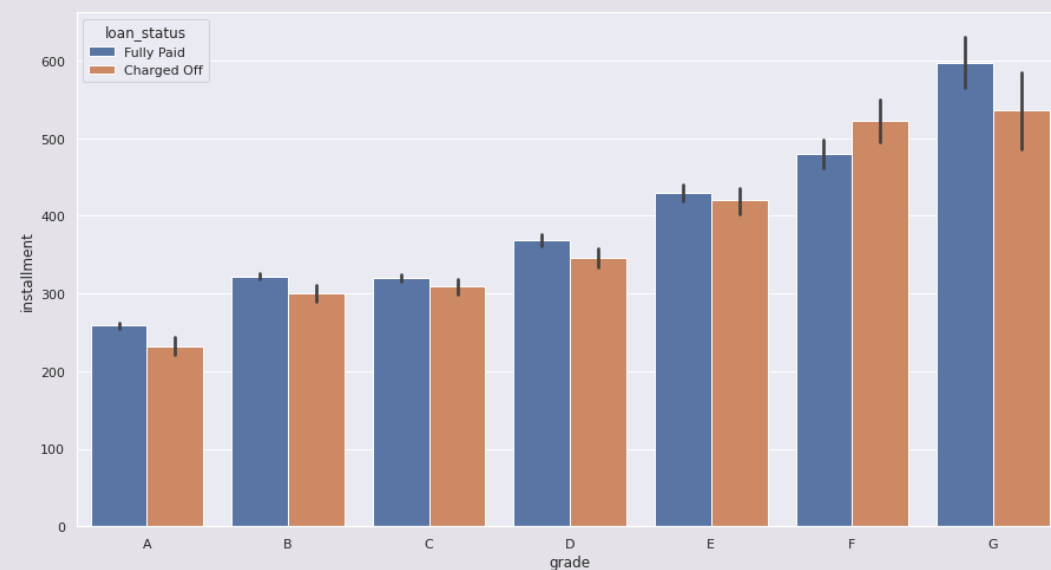
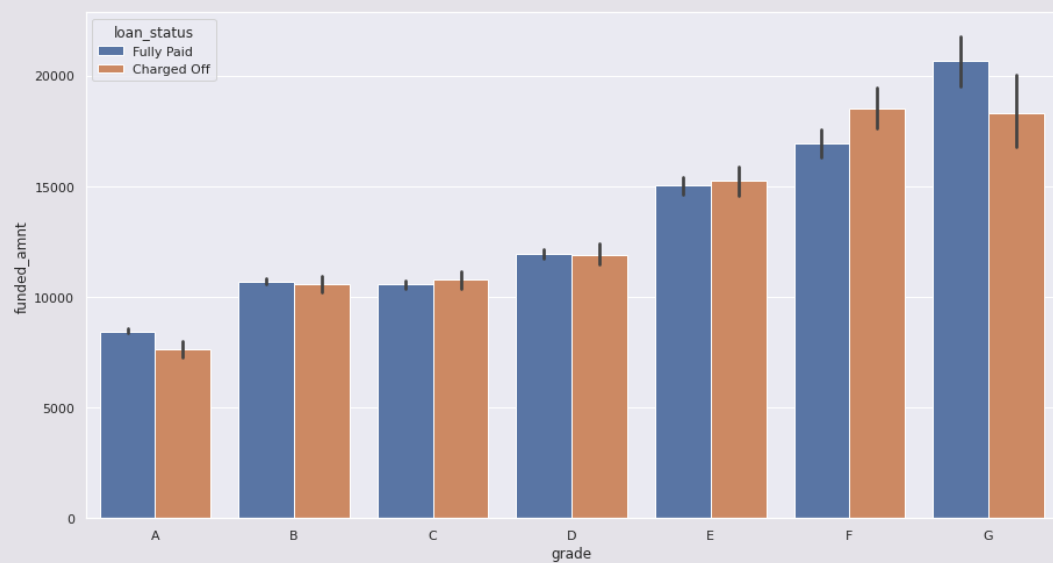


Grade shows maximum number of loans for B followed by A





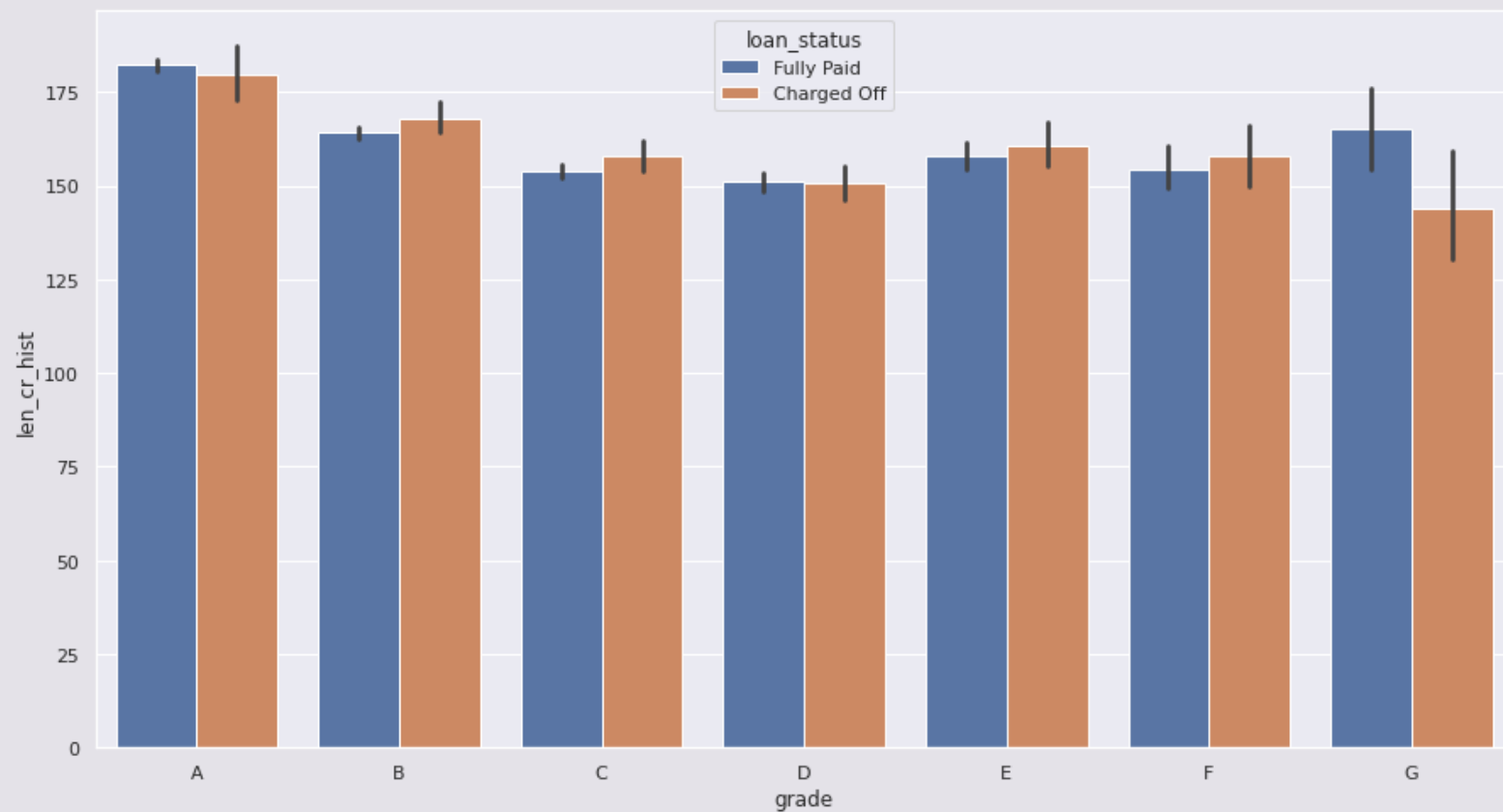
# Key Findings



Funded amount and Instalments show increasing trend with loan grade



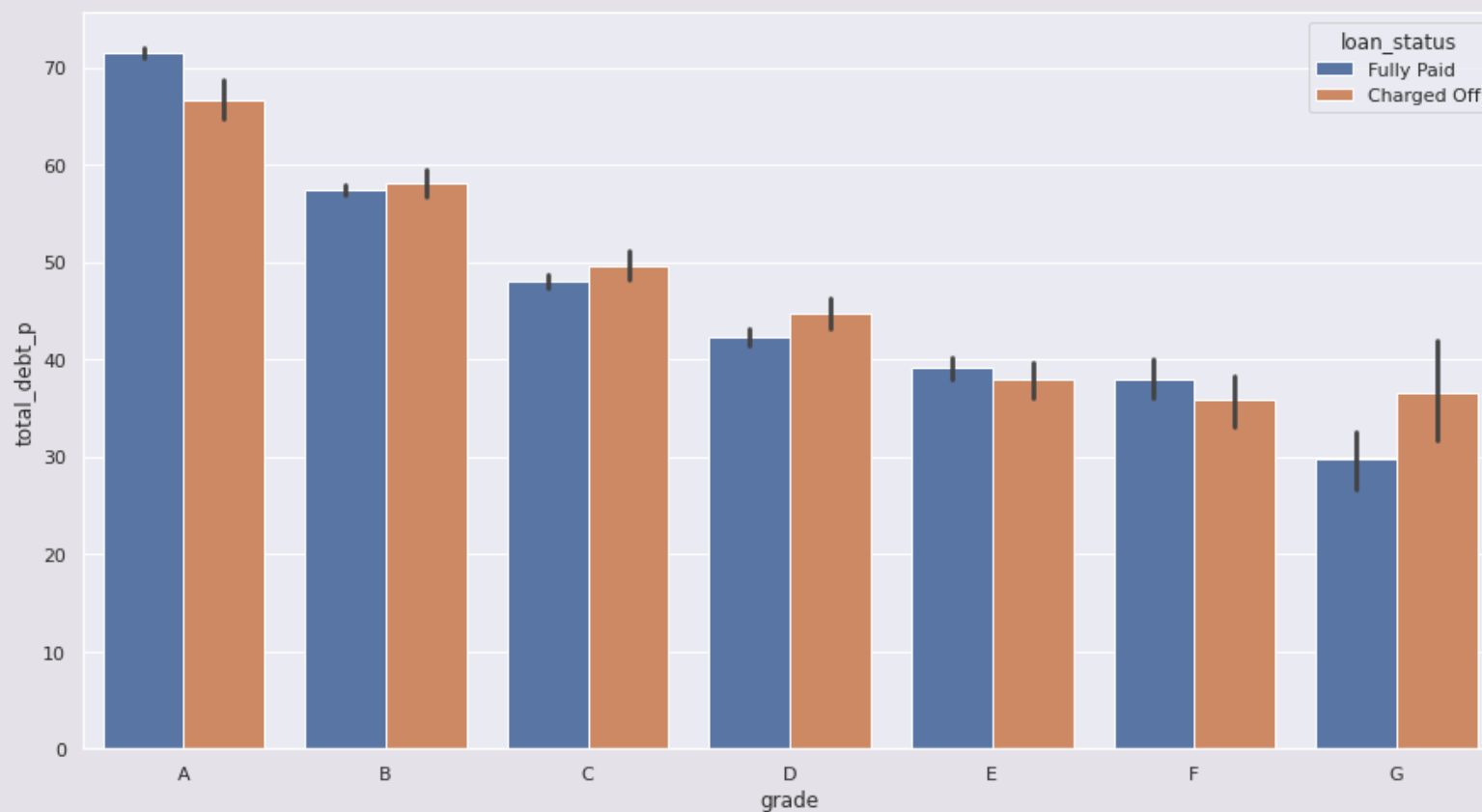
# Key Findings



Length of Credit History has no significance to loan grade



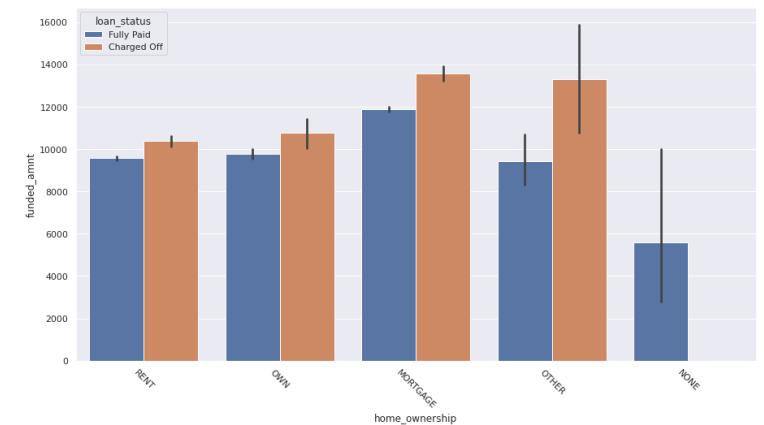
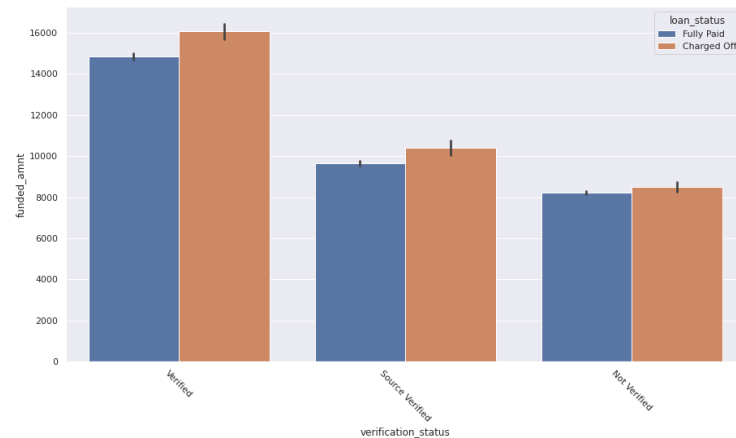
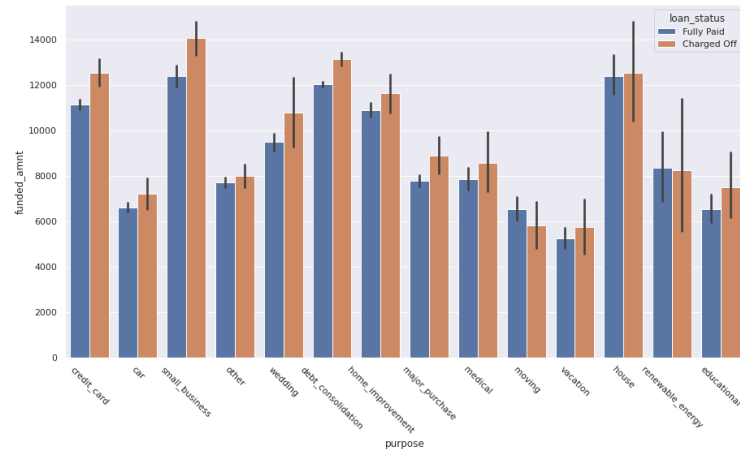
# Key Findings



Business Driven Metric of Instalment to Income percentage trends with Loan Grade

# Key Findings – General Observations

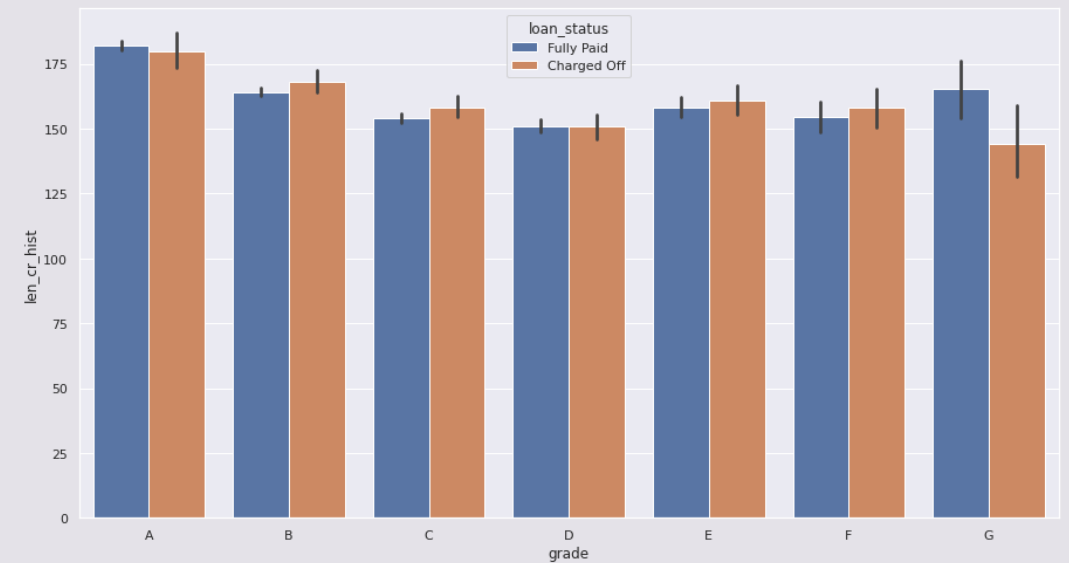
- Home ownership shows maximum cases of default for mortgage followed by 'other'.
- Max cases of default in verification status is for verified category.
- Purpose shows maximum default cases for 'house' followed by 'small business' and 'debt consolidation'



# Key Metrics

## Length of credit history

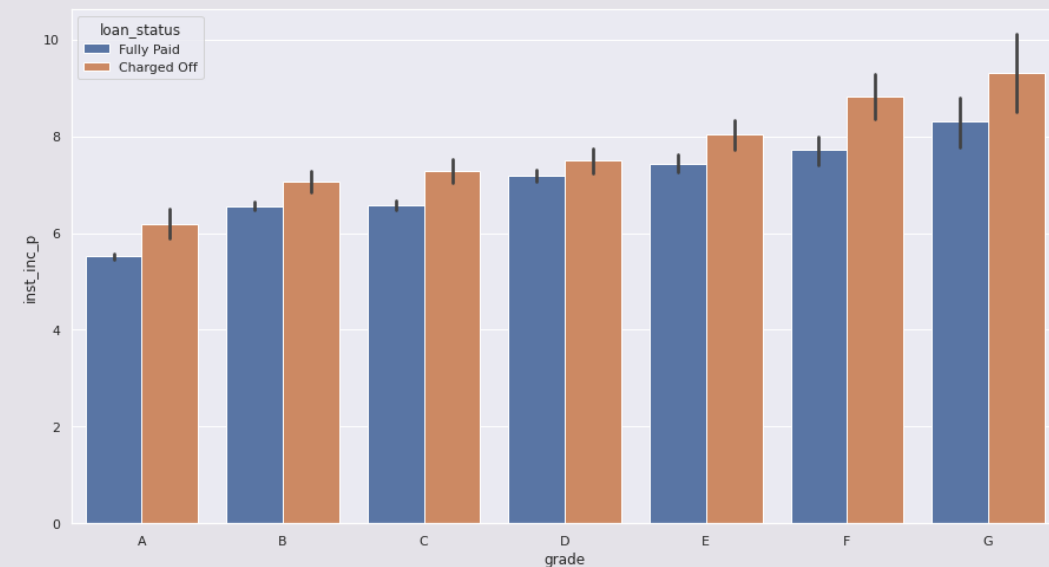
The length of credit history has **no significance** on grade and loan status.



# Key Metrics

## Installment Income Percentage

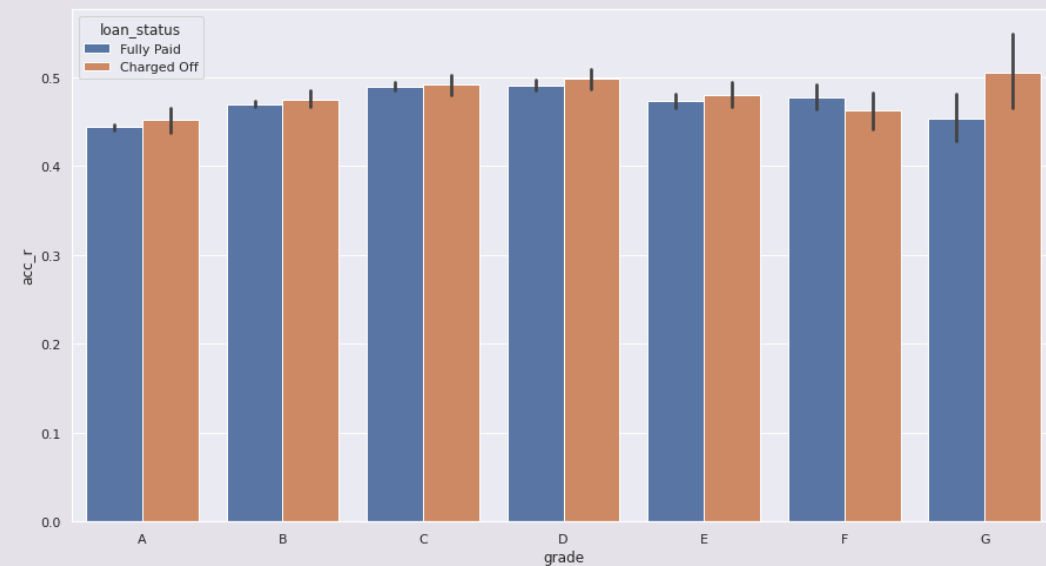
Metric value for fully paid loans  
defines maximum loan qualifying  
limit.



# Key Metrics

## Open to Total Account Ratio

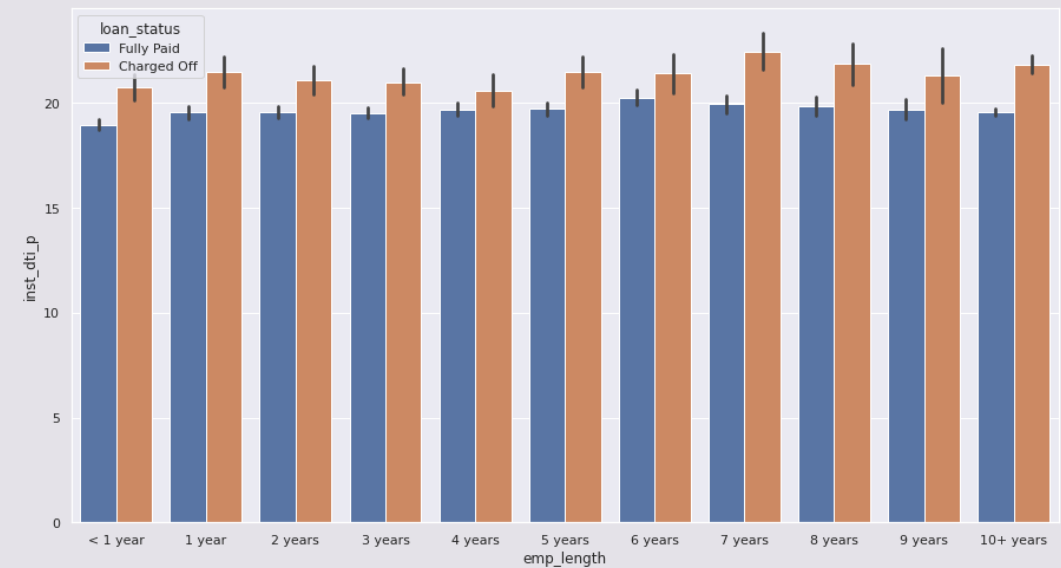
Metric value for fully paid loans defines maximum loan qualifying limit.



# Key Metrics

## Instalment - dti percentage

Metric value for fully paid loans  
defines maximum loan qualifying  
limit.

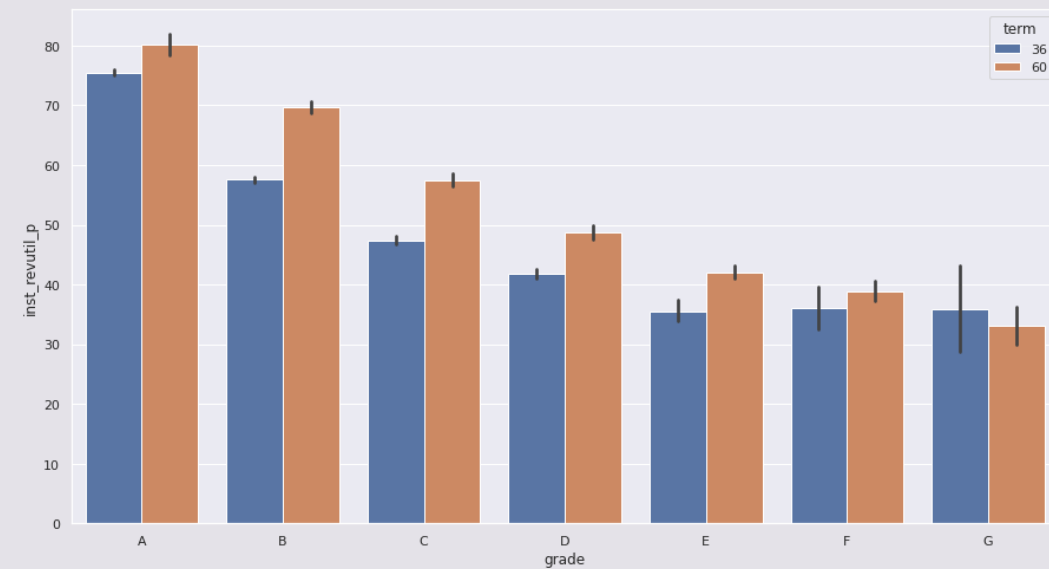




# Key Metrics

## Instalment-revol util percentage

Metric value for fully paid loans  
defines maximum loan qualifying  
limit.





# Conclusion



Loan Status – key indicator of loan and customer attributes



Loan Grade – guiding factor for loan decisions



Key Metrics to determine threshold values for loan grant

Ratio of open account to total account  
Instalment to income percentage  
Instalment to debt-to-income percentage