

# GRAMENER CASE STUDY

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# Background

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- ▶ Borrowers apply through an online platform where they are assigned an internal score. Lenders decide 1) whether to lend and 2) the terms of loan such as interest rate, monthly instalment, tenure etc.
- ▶ Some popular products are credit card loans, debt consolidation loans, house loans, car loans etc.
- ▶ Business Objective
- ▶ To identify variables which are strong indicators of default and potentially use the insights in approval / rejection decision making.

# Data Understanding

- Types of variables
  - Customer (applicant) demographic
  - Loan related information & characteristics
  - Customer behaviour (if the loan is granted)

## CUSTOMERS DEMOGRAPHICS

Employment length
Employment title
Annual Income
Zip Code
Description

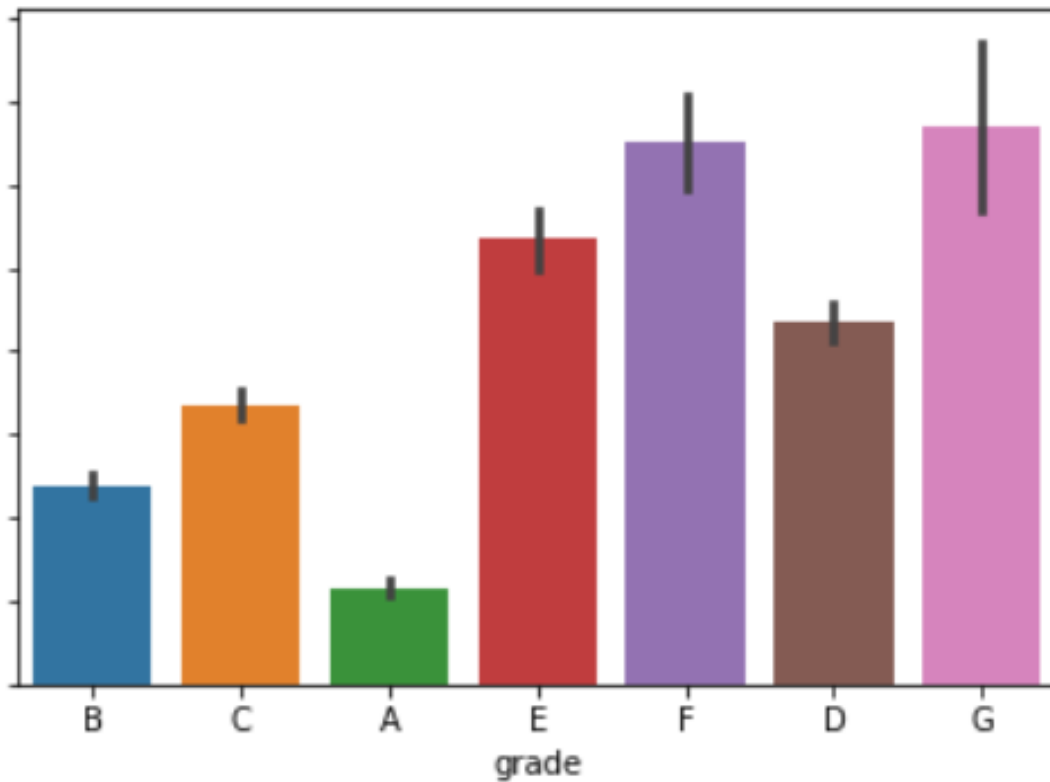
## LOAD INFORMATION & CHARACTERISTICS

Loan amount
Funded amount
Funded Amount Investment
Interest Rate
Loan Status
Loan Grade

## CUSTOMER BEHAVIOUR VARIABLES

Delinquency year-2
earliest credit line
Revolving balance
Recoveries
Application Type
Loan purpose

# Default rates across grade of the loan

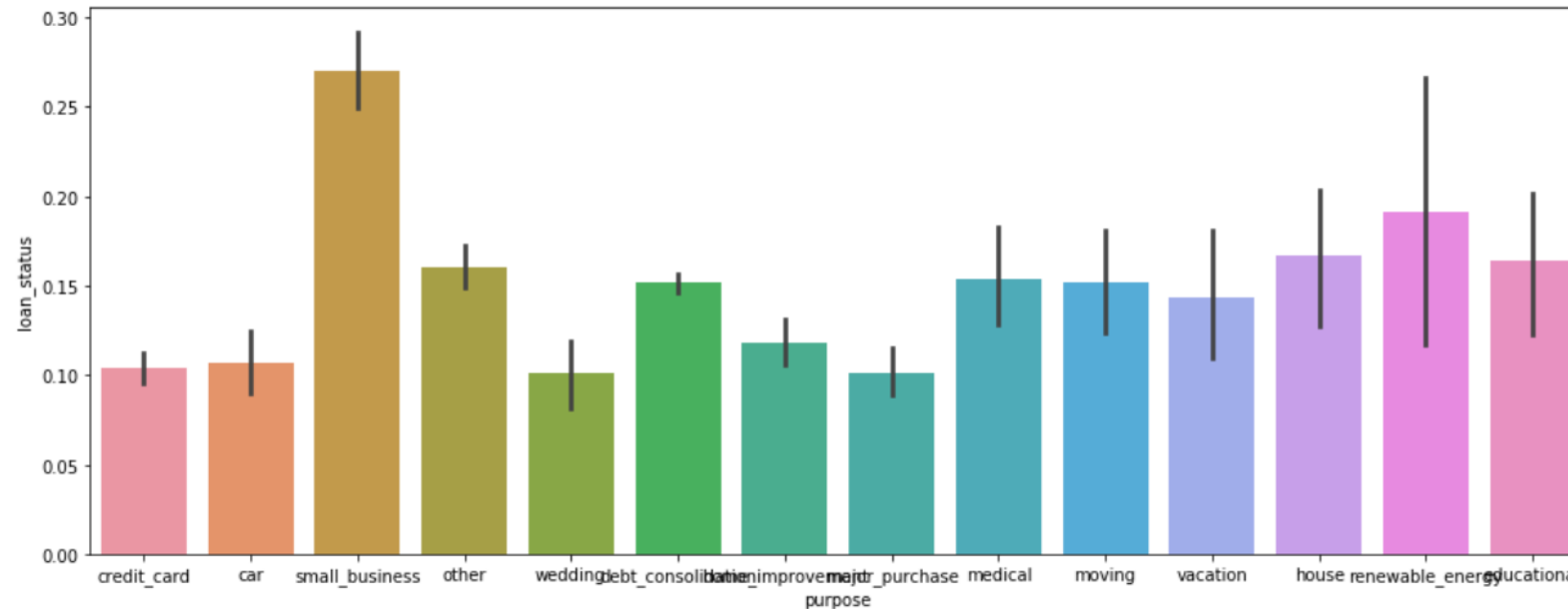


- ▶ We can see the trend that moving from A to G the default rate increases.
- ▶ 'A' has lowest default rate and 'G' has the highest default rate

# Loan Purpose Distribution

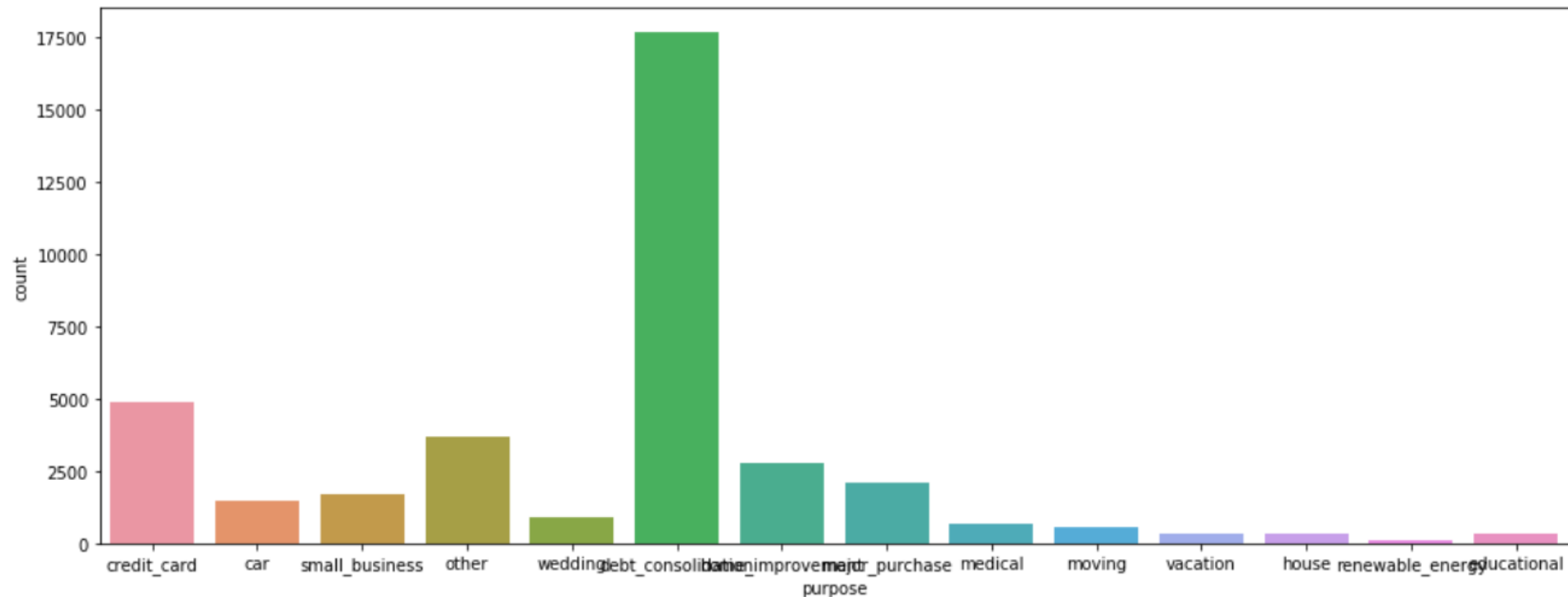
Small businesses have the higher chances to default as compared to any other.

27% small business  
20% renewable energy  
17% educational loan



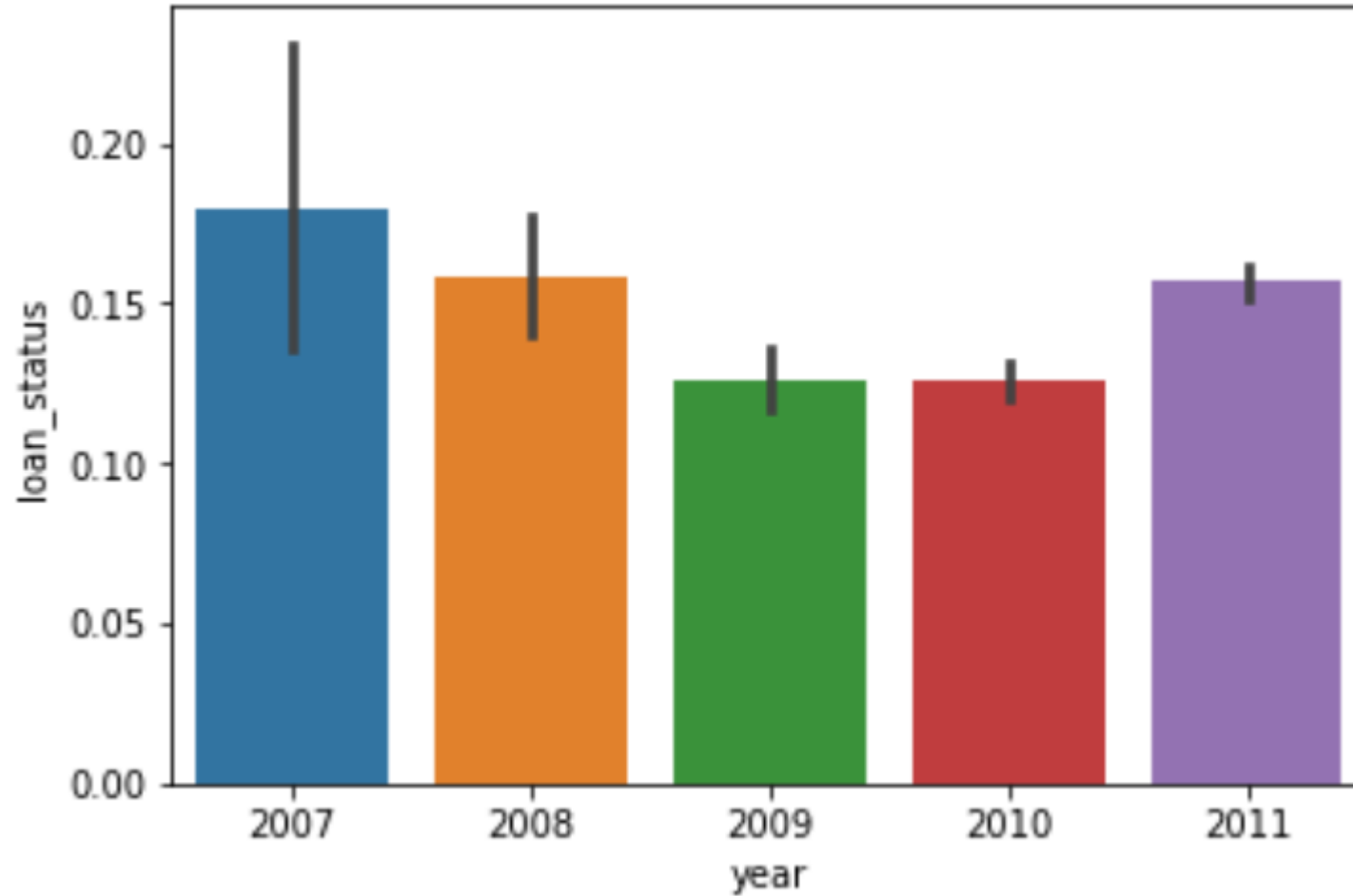
# Number of loans for each type (purpose) of the loan

Debt consolidation is the highest that is 17500  
The least number is the renewable energy



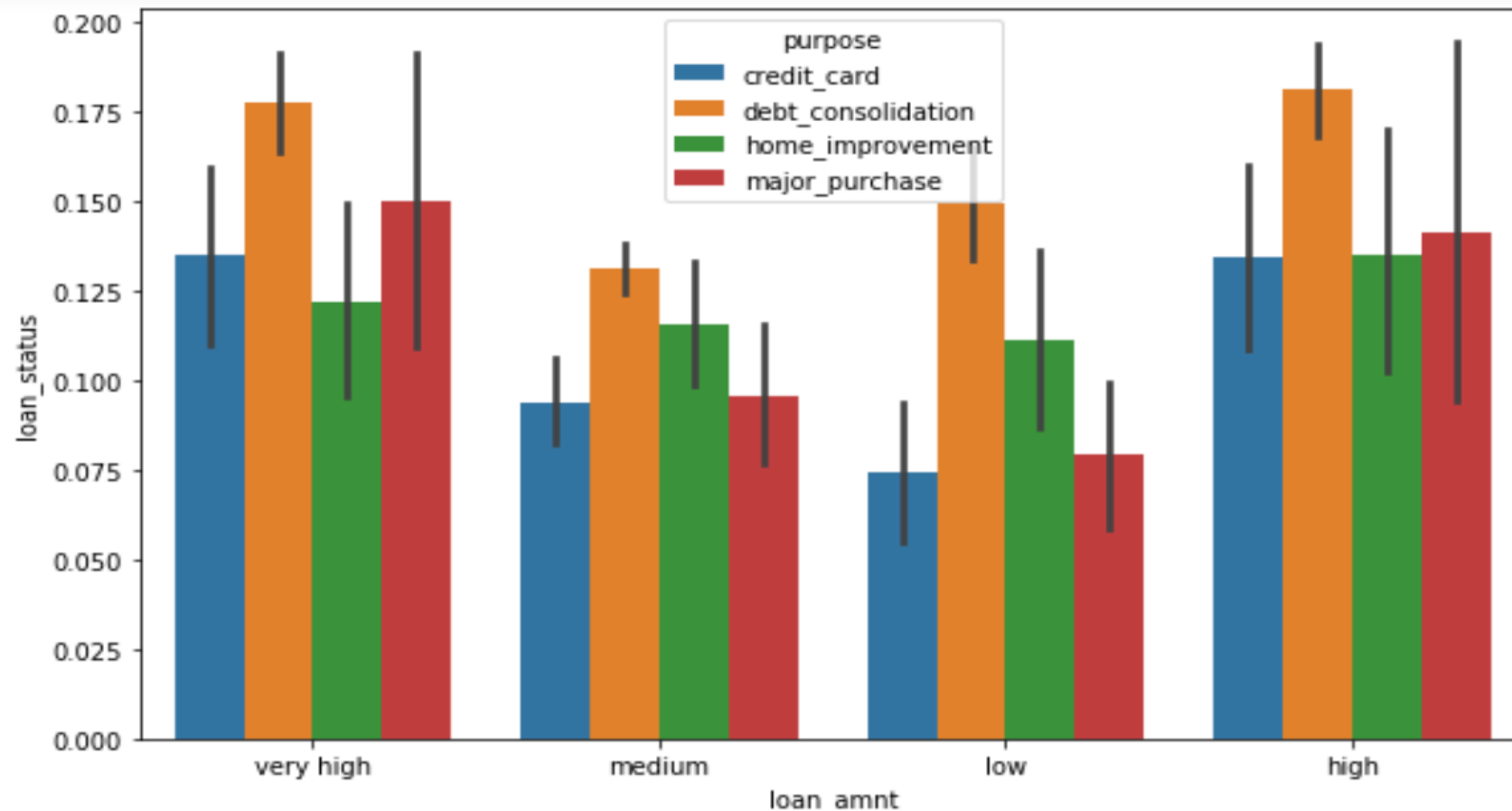
# Year wise default rate

The default rate had suddenly increased in 2011, inspite of reducing from 2008 till 2010



# Loan Amount

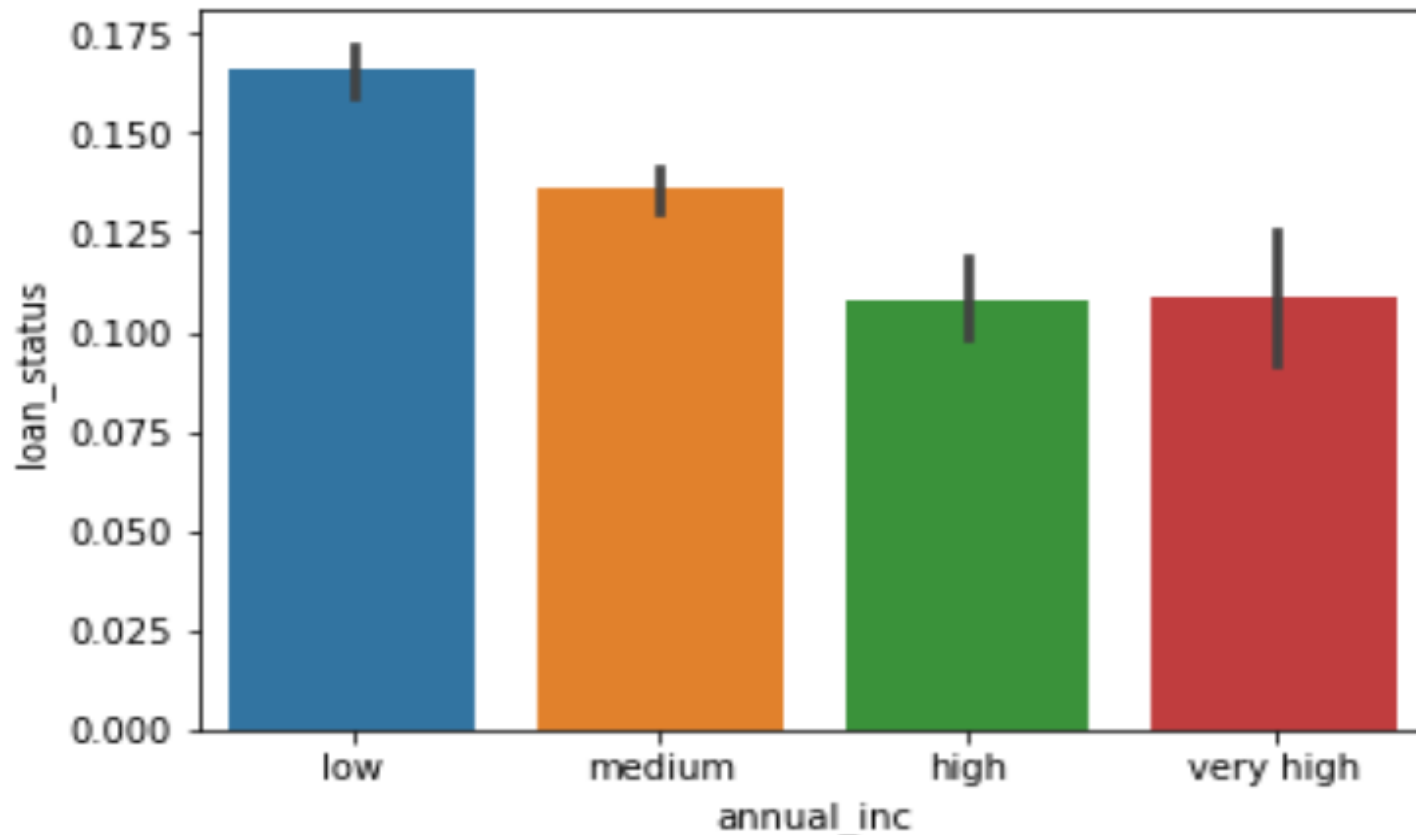
Higher the loan amount, higher the default rate along the different purposes





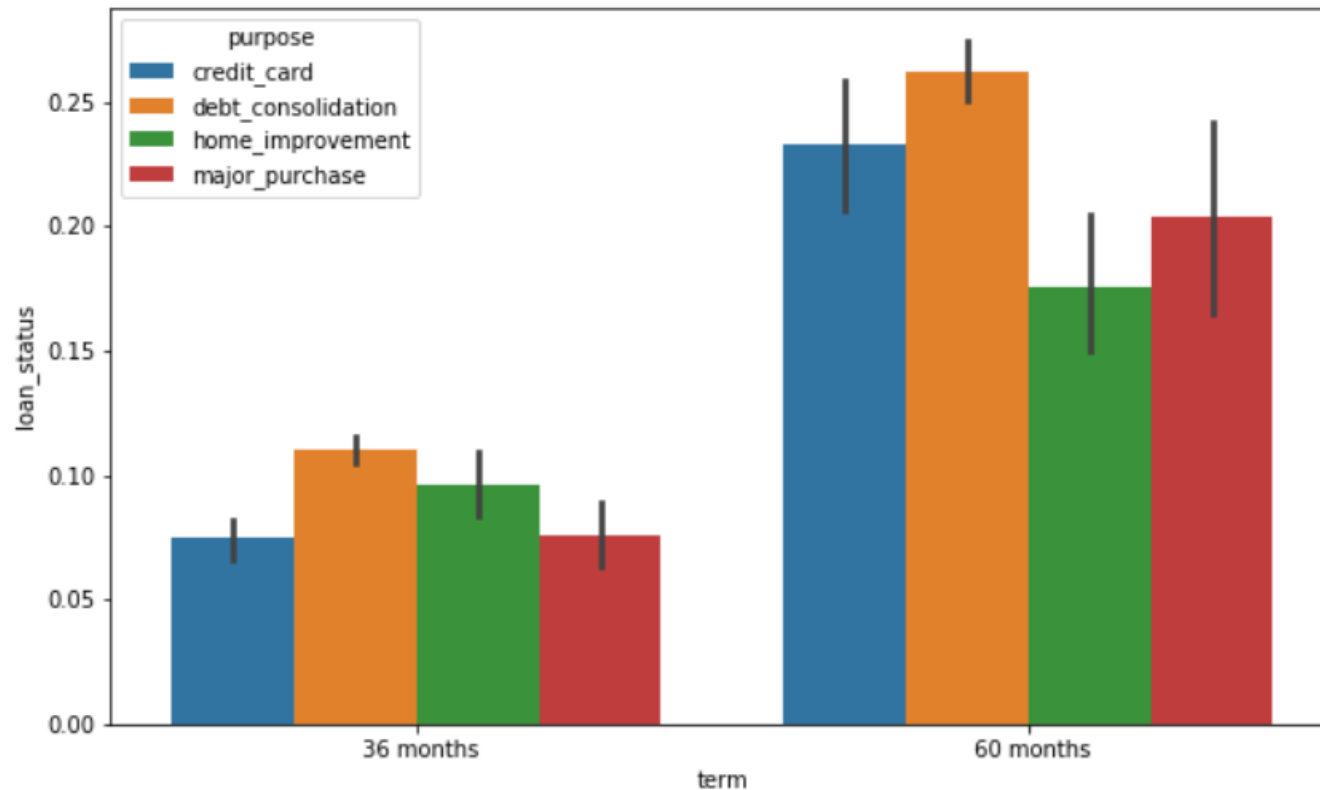
# Annual income and default rate

Lower the annual income, higher the default rate



# Compare the default rates across two types of categorical variables

Purpose of loan is constant and another categorical variable which changes



# Recommendations

- ▶ As the loan amount is high, there are chances to default for a customer is not good sign for the institution but at the same time this high amount of loan brings more interest to the institution.
- ▶ So taking such risks make the institution grow and make more profit
- ▶ At the same time we should keep other variables in mind at the time of approving/rejecting the loan.

**THANK YOU**