



LENDING CLUB CASE STUDY

PROBLEM STATEMENT

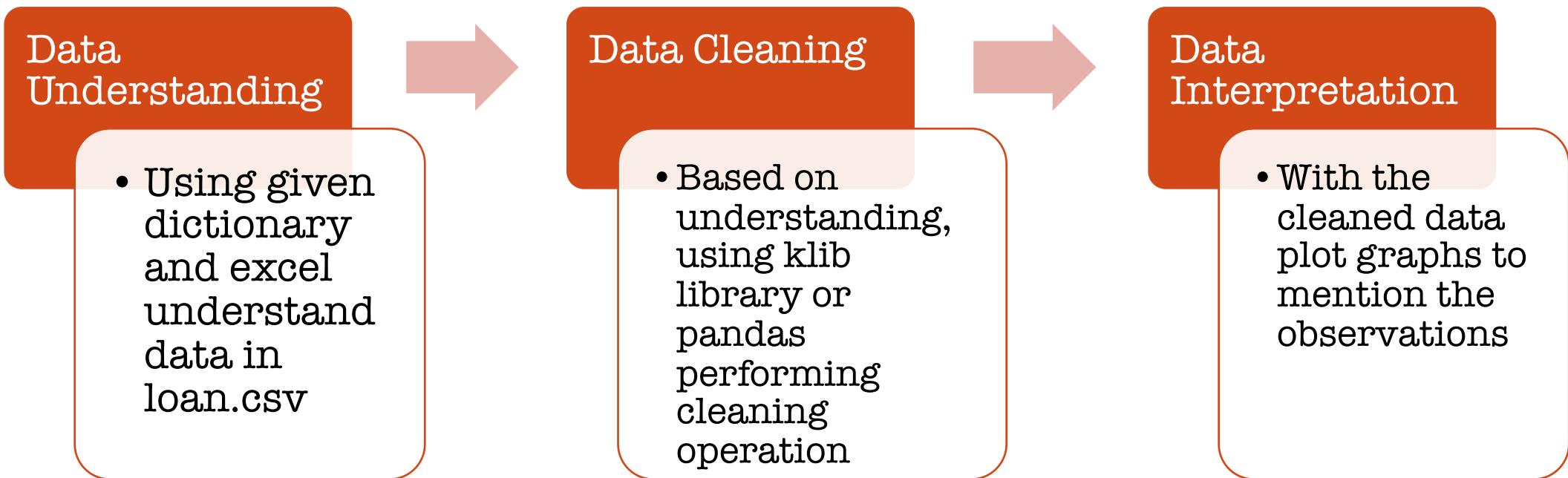
For a **consumer finance company** understand the **driving factors (or driver variables)** behind loan default | loan charged off.

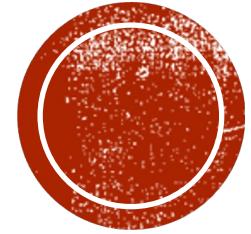
Given dataset which contains the complete loan data for all loans issued through the time period 2007 to 2011.

Each column meanings are defined a given data dictionary.



APPROACH

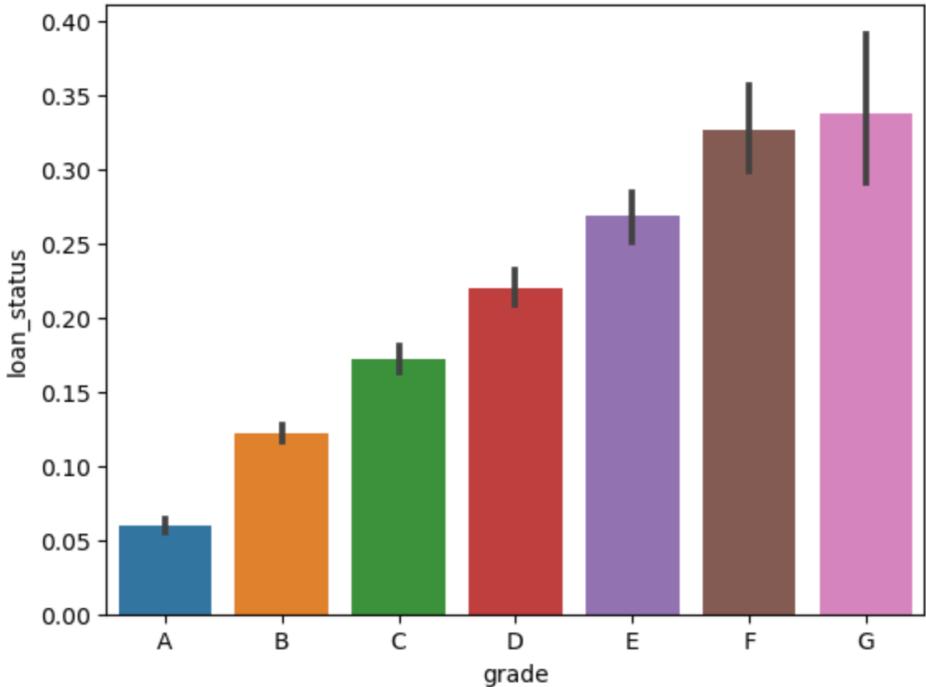




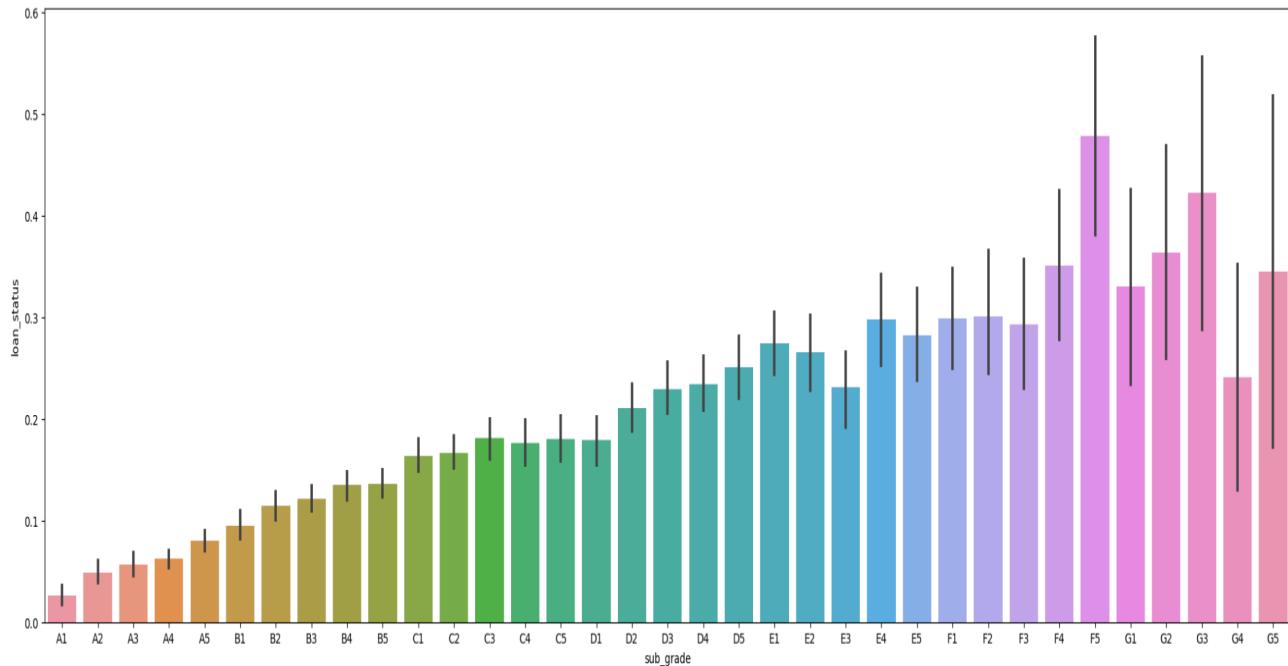
**LET US UNDERSTAND THE
FACTORS WHICH
INFLUENCE CHARGED OFF**

GRADES :
AS GRADES GOING
FROM A TO G ,
CHARGED OFF
INCREASES. GRADE
G ARE MORE
DEFAULTING.
GRADES
CATEGORIES LOAN
BASED ON SAFE
LEVEL TO LEND . A
LEVEL BEING
SAFER . C LEVEL
WORST

As Grades are going from A to G , Default rates increases .



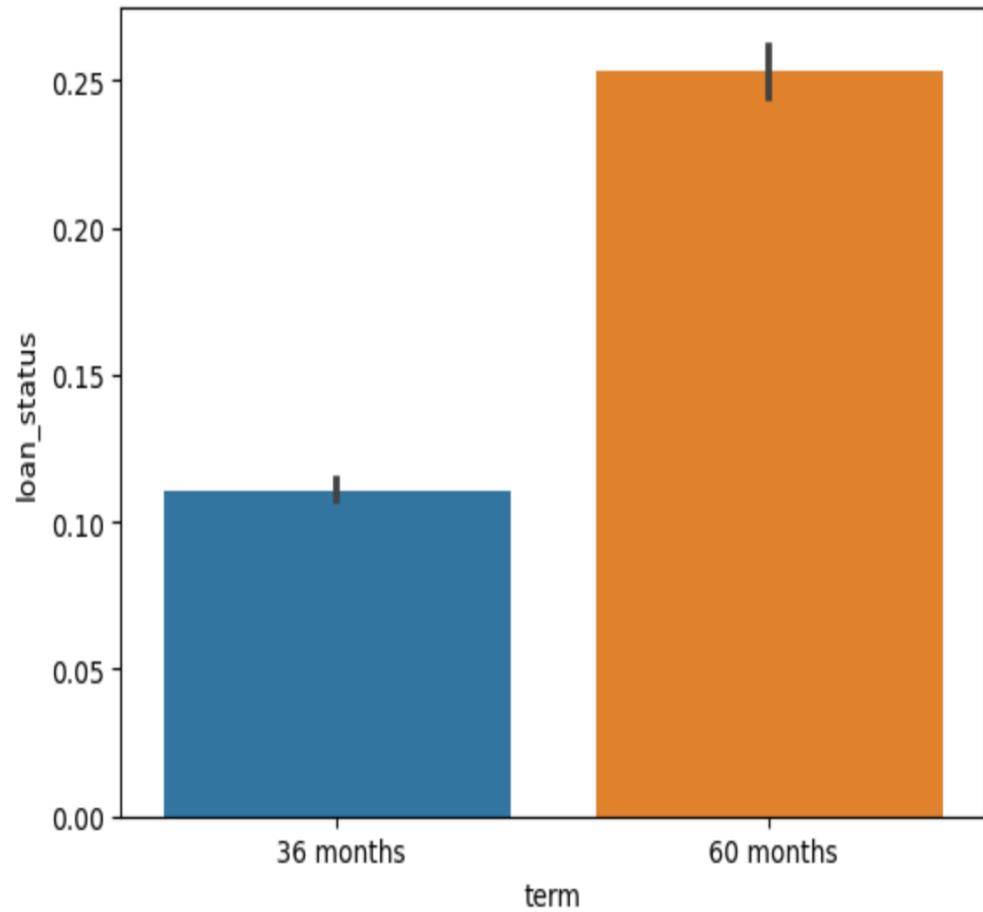
below bplots explain how the subgrades impacts the charged off



SUBGRADES :
PLOTS SHOWING
HOW SUBGRADES
WITHIN EACH
GRADES VARIES



people who took loan term of 5 years do more charged off

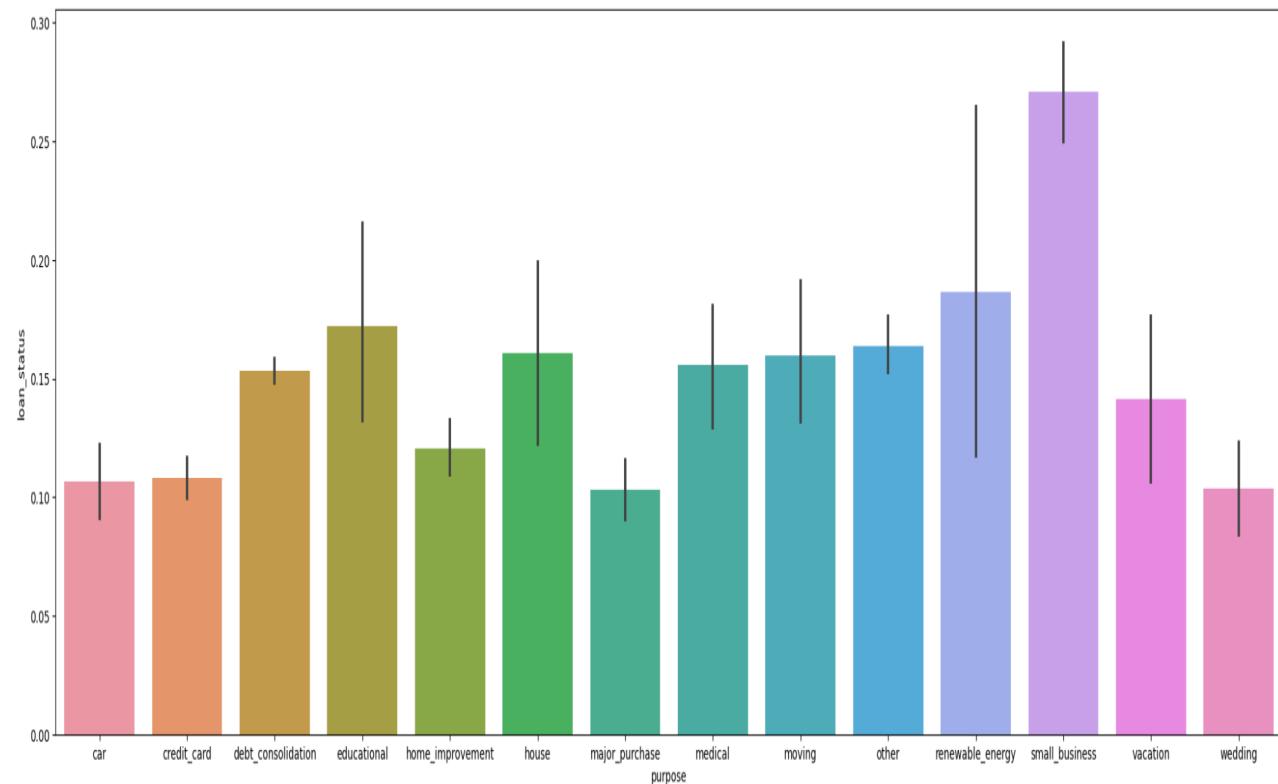


TERM :
**PEOPLE WHO REPAY
LOAN BY 60 MONTHS
DEFAULTED MORE
THAN THE ONES WHO
TOOK IT FOR 36
MONTHS.**



Inferences :

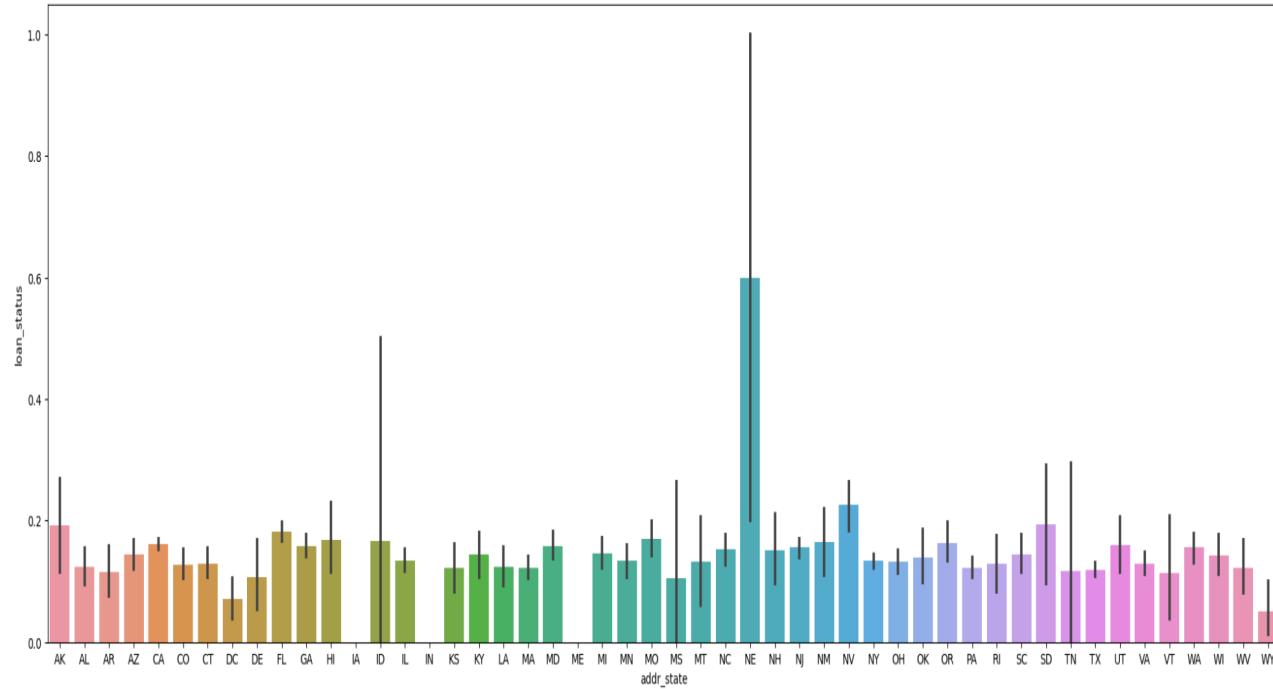
People who did small business did more defaults .



**PURPOSE :
PEOPLE WHO DO
SMALL BUSINESS
DEFAULTS MORE .
BANKS SHOULD
VALIDATE PEOPLE
OF SUCH BUSINESS
MORE AND DECIDE
ACCORDINGLY**

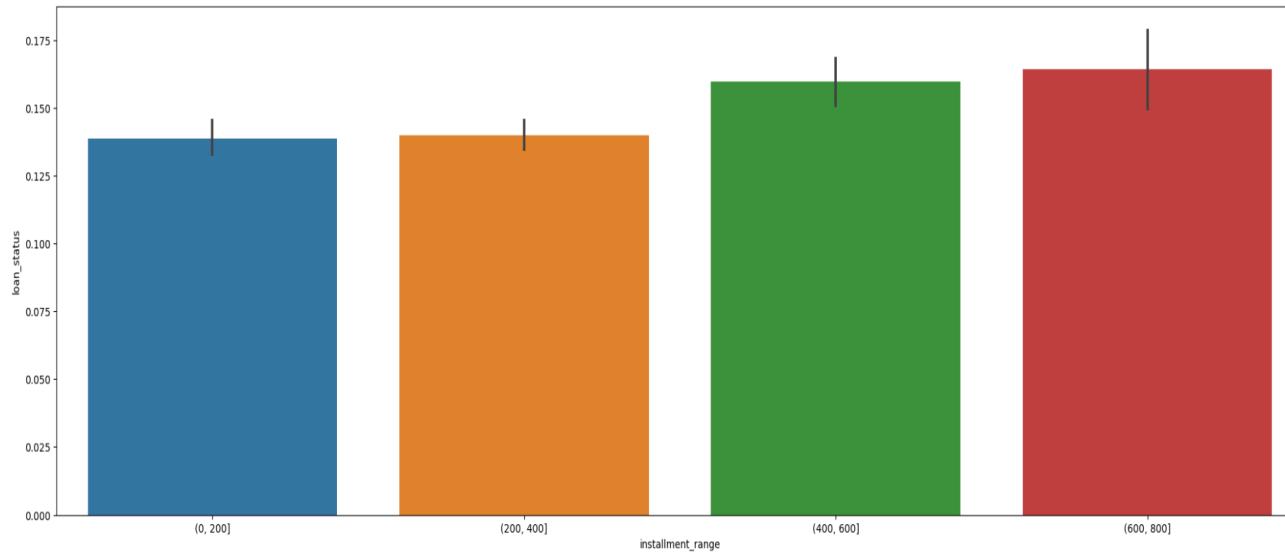


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# Inferences :  
#Address State NE are having more chances of defaulters
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STATE :
APPLICANT FROM
'NE' STATE ARE
DEFAULTING
MORE.

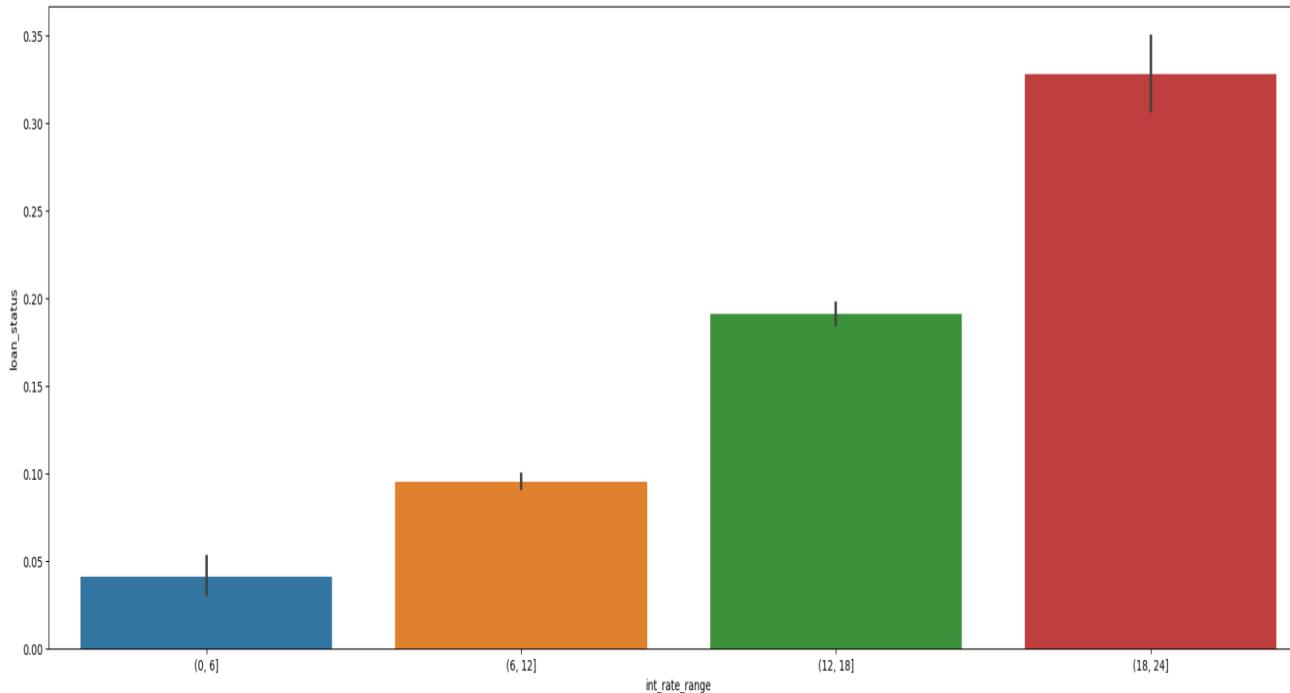
As Installment is increasing more, Charged off is more



INSTALLMENT :
**AS INSTALLMENT
INCREASES ,
DEFAULT
INCREASES .**

Inferences :

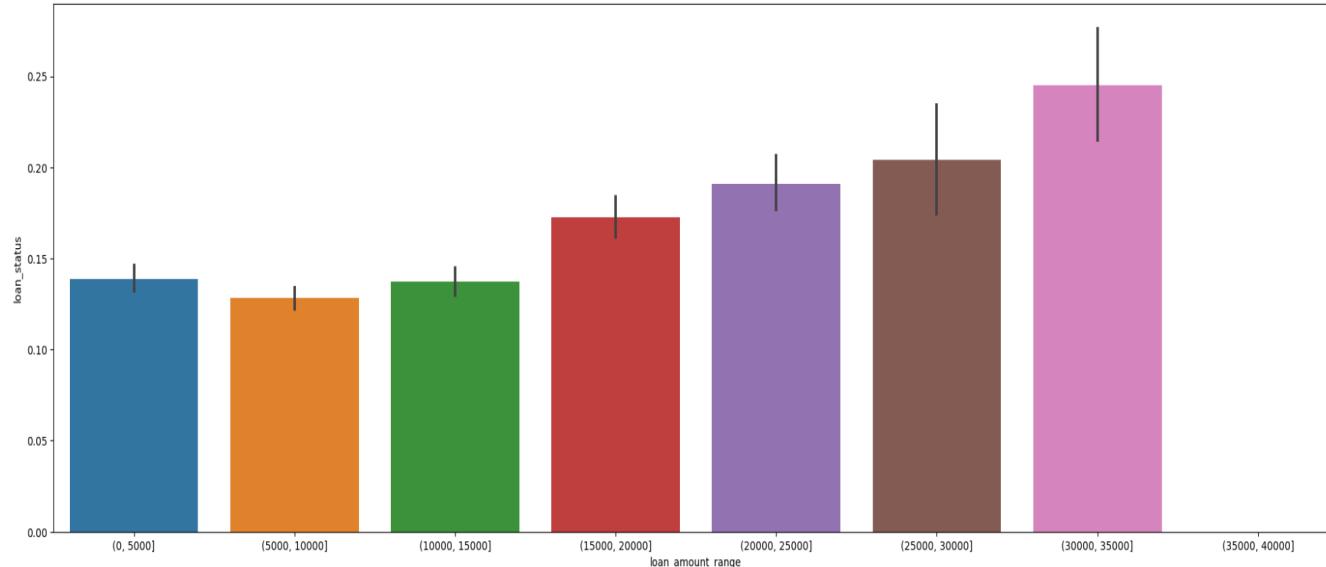
As Interest Rate is more , Charged Off is more .



**INTEREST RATE :
INTEREST RATE
IMPACTS THE
DEFAULT RATE . AS
INTEREST RATE
INCREASES ,
DEFAULT RATE
INCREASES**

Inferences :

As Loan amount increases , Charged off is also increasing



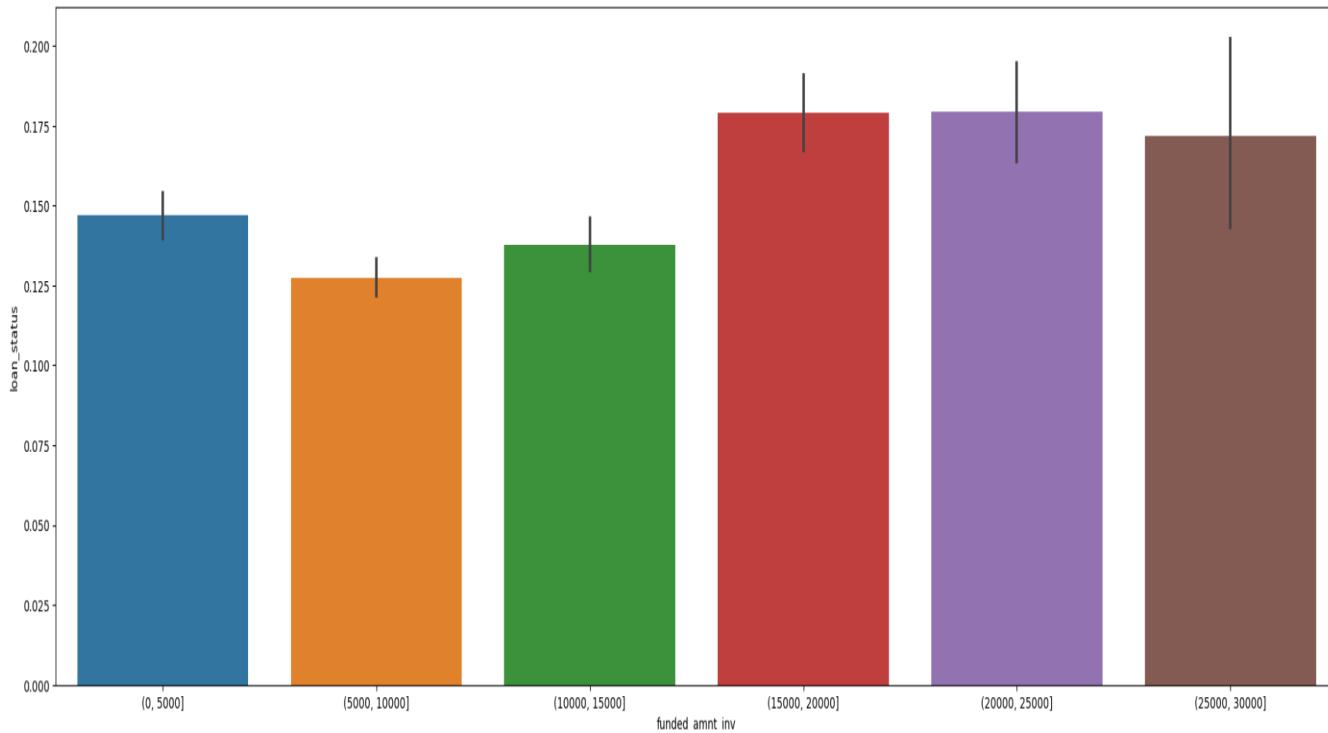
**LOAN AMOUNT :
BASED ON THE
DATA, AS LOAN
AMOUNT
INCREASES , LOAN
CHARGED OFF
ALSO INCREASES**

FUNDED AMOUNT INV

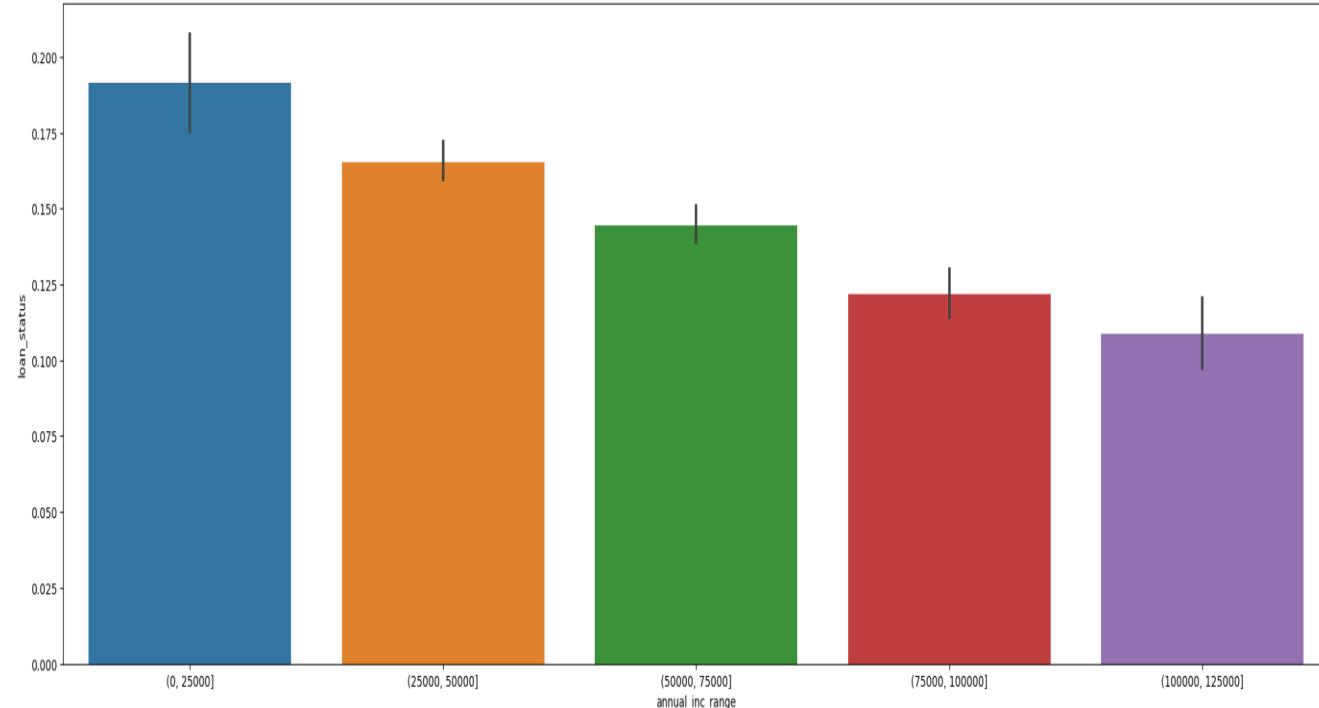
:

**BASED ON GRAPH ,
WE CAN ANALYSE
THAT AS LOAN
AMOUNT INVESTED
INCREASES ,
DEFAULT ALSO
INCREASES**

As Fund amount inv is increasing then charged off % also increases



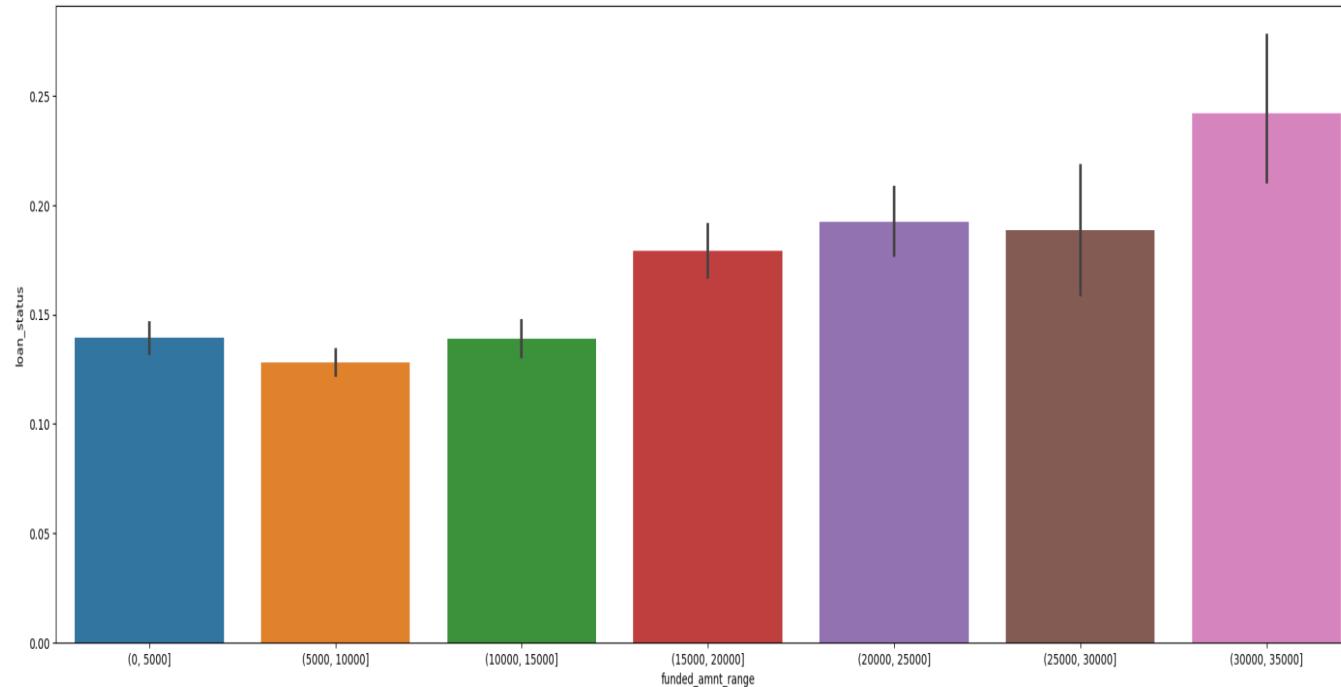
As annual income is low , charged off is high



**ANNUAL INCOME :
AS ANNUAL INCOME
INCREASES ,
CHARGED OFF
DECREASES . PEOPLE
OF LOW INCOME ARE
DOING MORE
DEFAULTS**



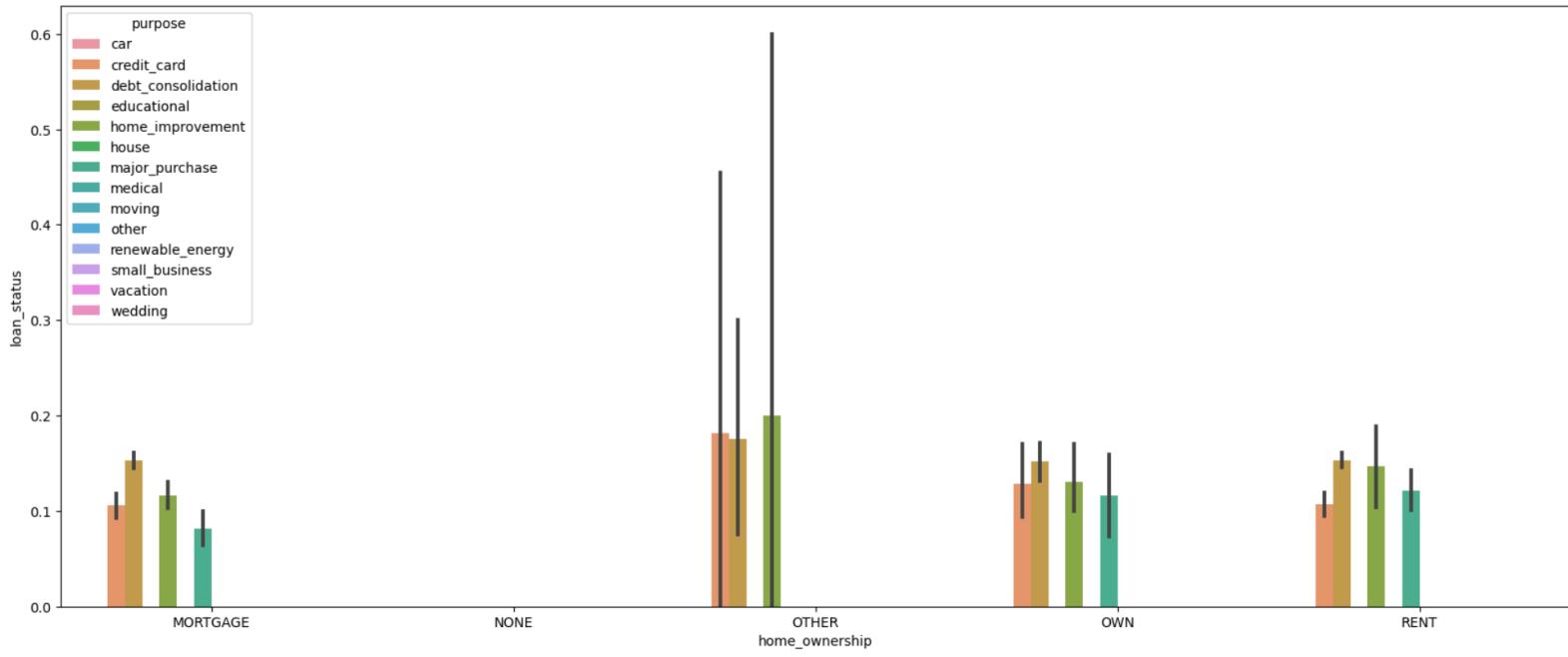
As Fund Amount is increasing , charged off also increases .



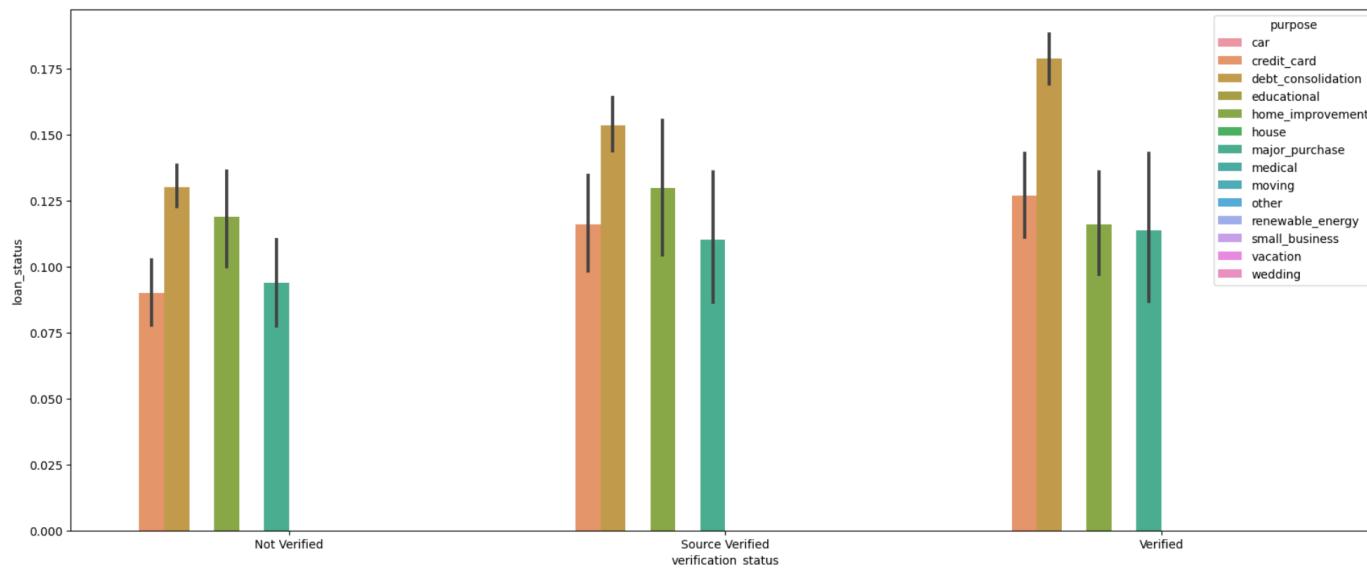
**FUNDED AMOUNT :
AS FUNDED
AMOUNT
INCREASES ,
CHARGED OFF
INCREASES**

PATTERNS OF ATTRIBUTE ‘PURPOSE’ WITH OTHER CATEGORICAL VARIABLES

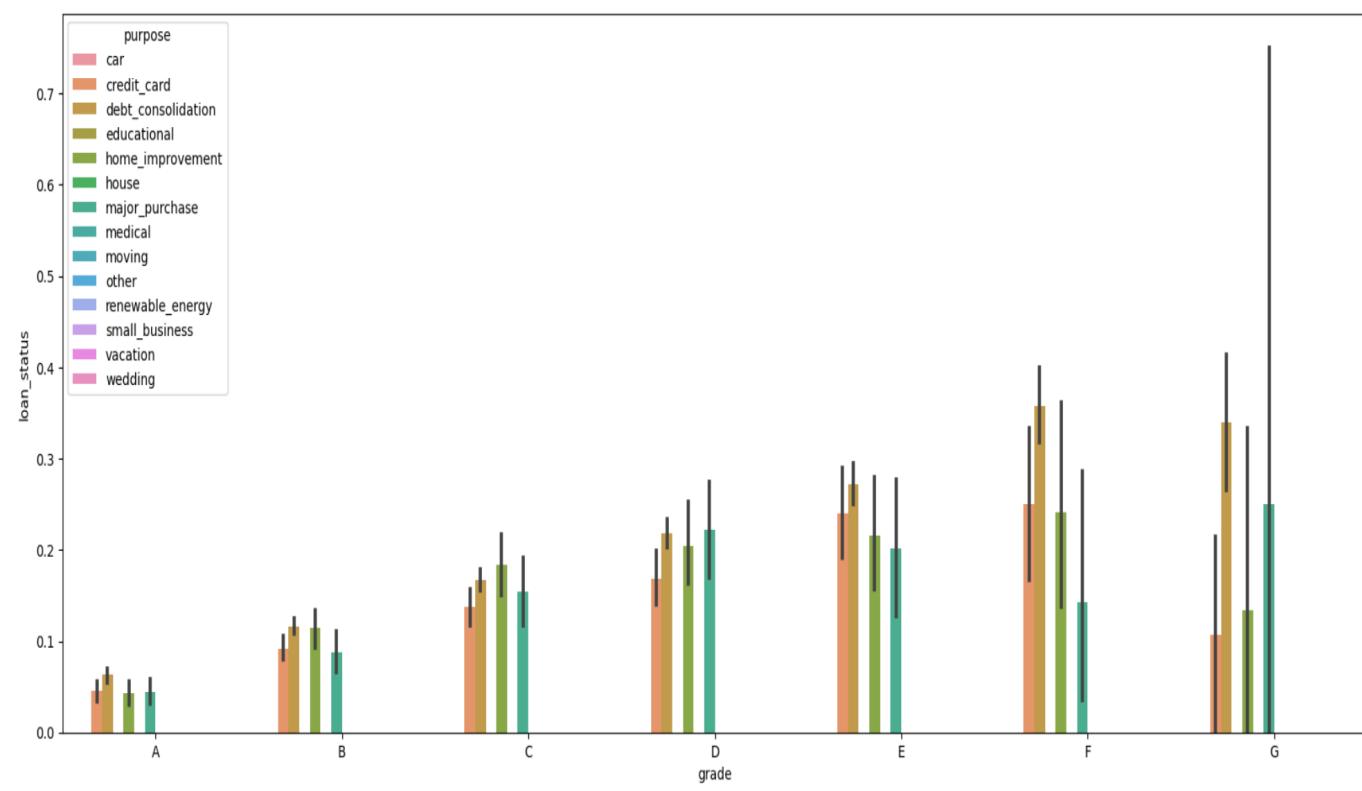




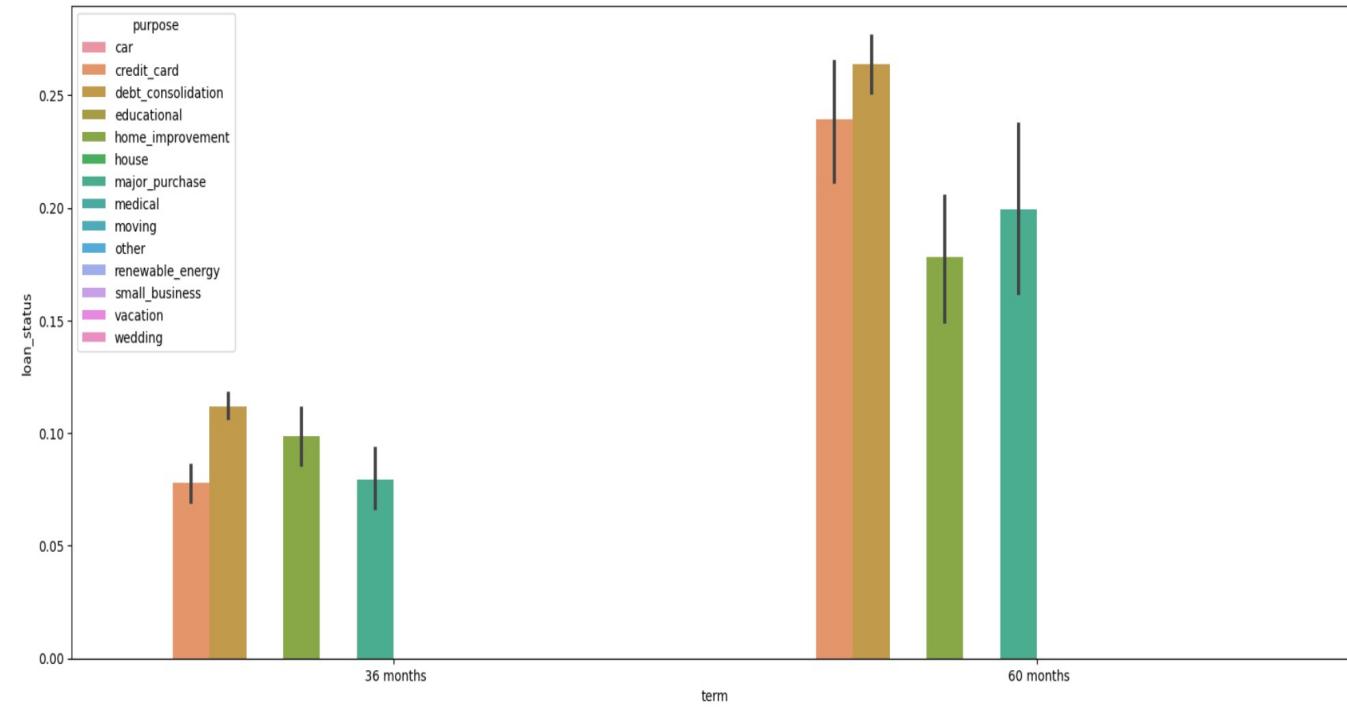
**WITH HOME
OWNERSHIP**



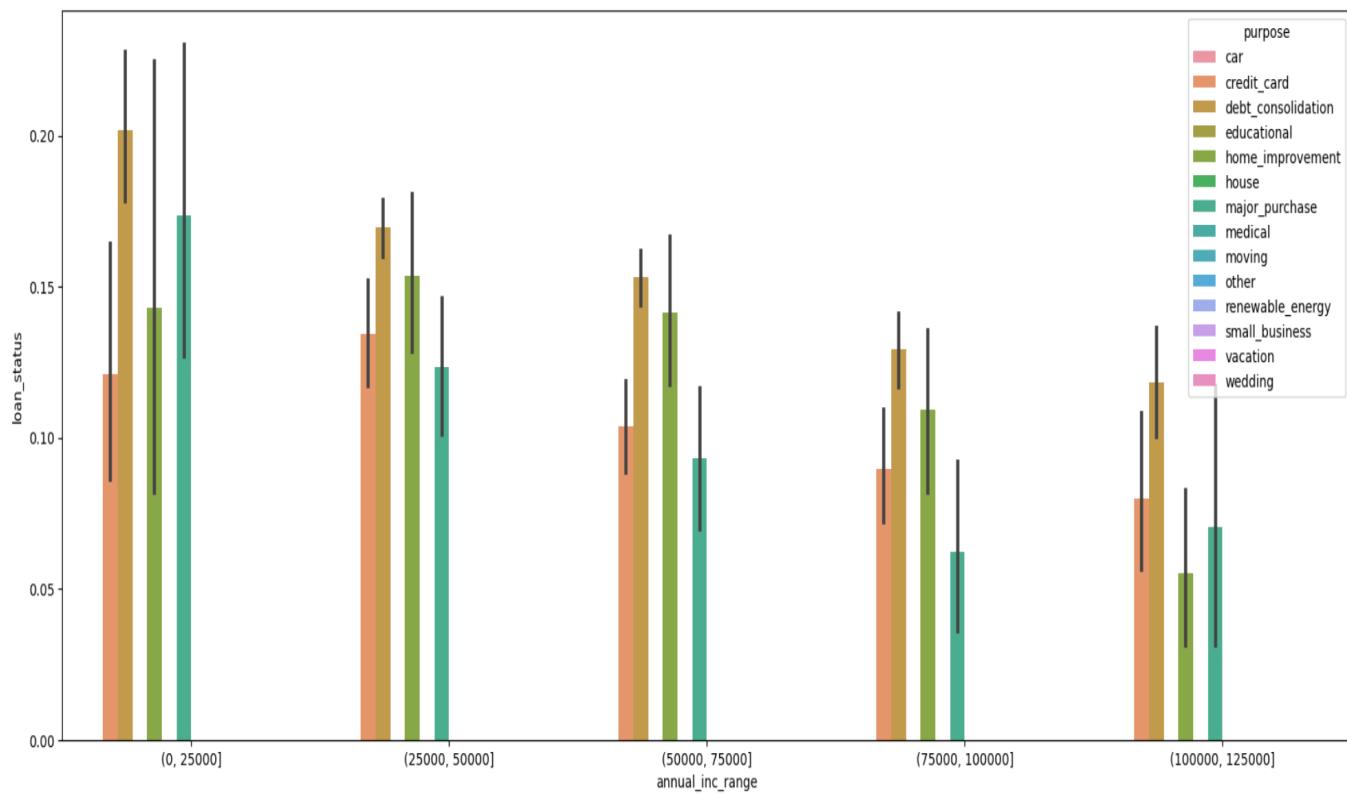
WITH
VERIFICATION
STATUS



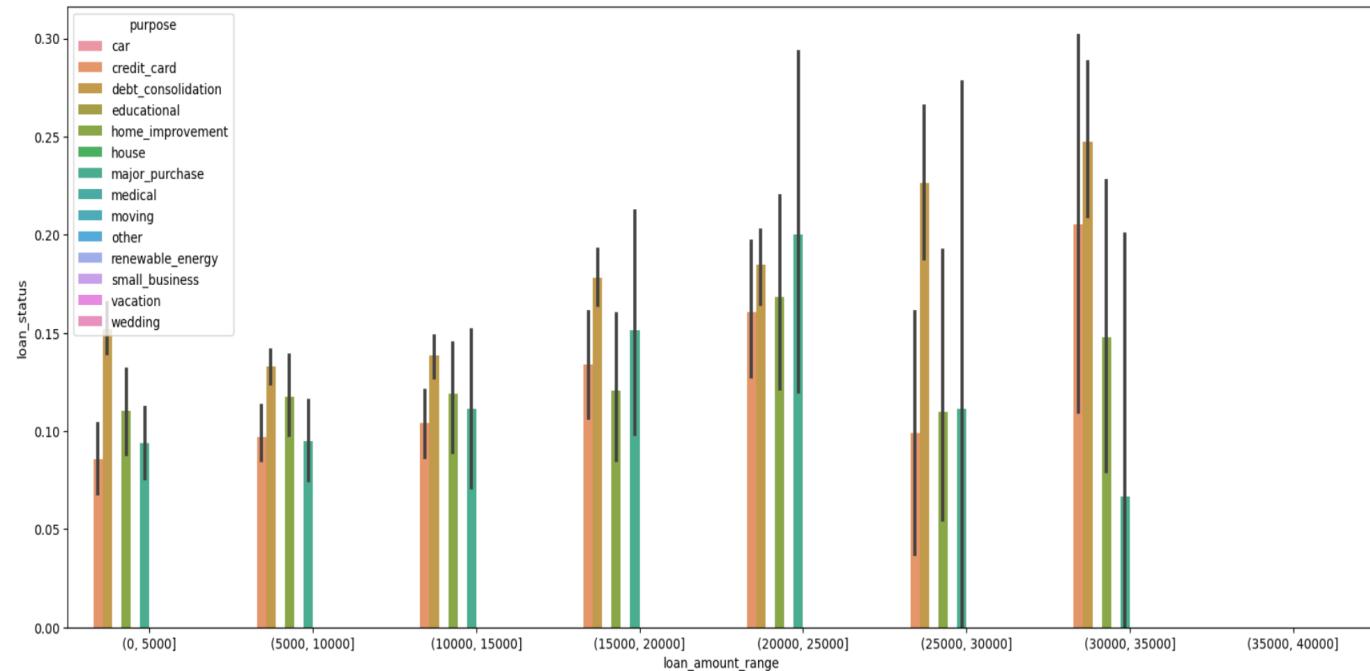
WITH GRADES



WITH TERM



WITH ANNUAL INCOME



WITH LOAN AMOUNT