



LENDING CLUB CASE STUDY

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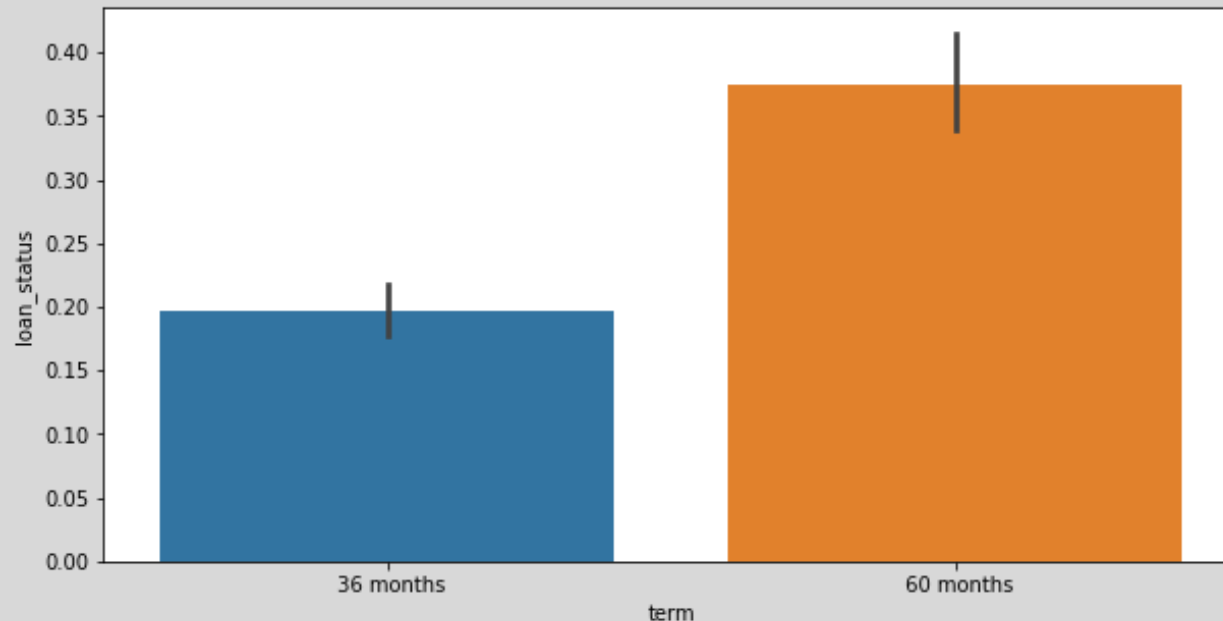
Data sample:

- We are provide with loan approval data where the target variable is "Loan_status". This column has results like "Fully paid", "Current", "Charged Off".
- We are going to provide analysis of how some contents like "Grade", "Annual Income", "interest rate", etc. are affects the loan status.
- Here is sample dataset:

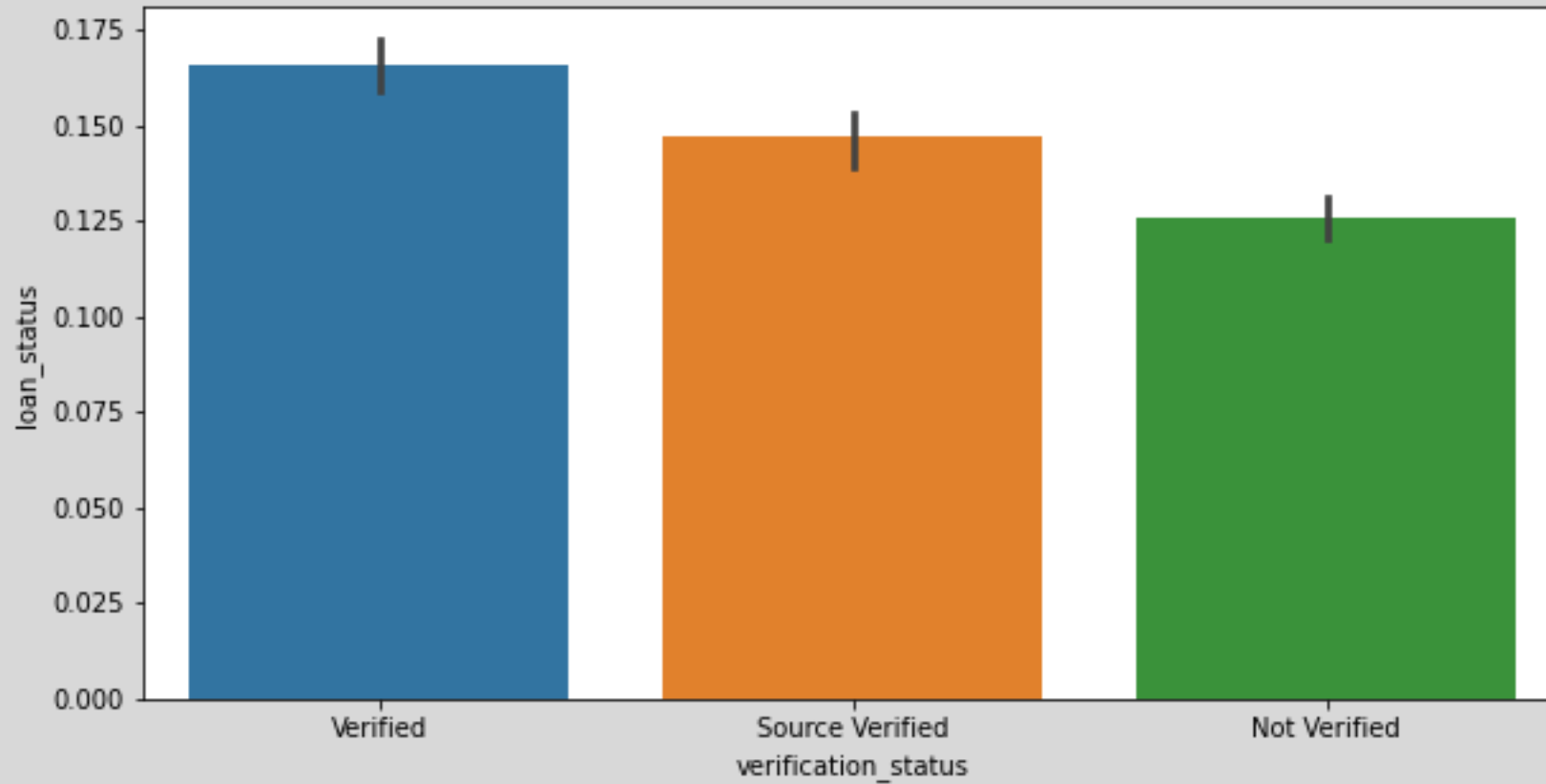
	id	member_id	loan_amnt	funded_amnt	funded_amnt_inv	term	int_rate	installment	grade	sub_grade	emp_title	emp_length	home_ownership	annual_inc	verification_status	issue_d	loan_status
2	1077175	1313524	Low	low	Low	36 months	high	84.33	C	C5	NaN	10	RENT	low	Not Verified	2011-12-01	0
8	1071795	1306957	Medium	medium	Medium	60 months	high	152.39	F	F2	NaN	4	OWN	low	Source Verified	2011-12-01	1
45	1051117	1282787	Medium	medium	Medium	36 months	low	451.15	B	B1	golfers warehouse	6	RENT	medium	Not Verified	2011-12-01	0

Default rate:

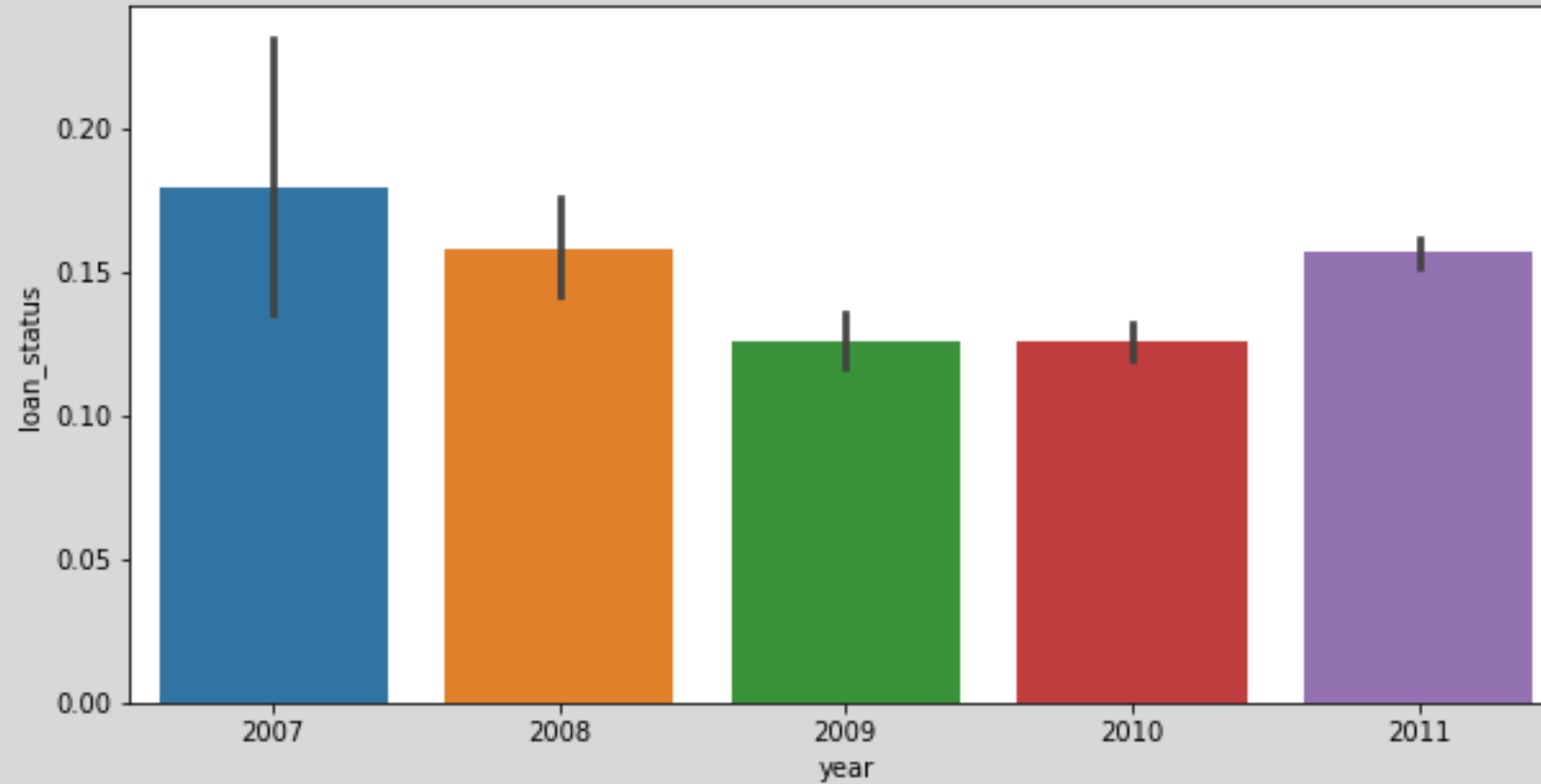
- According to our analysis, the people who has fully paid the loan are around 32145 and the people who are still paying or haven't paid are 5399.
- We have further analysed that in these numbers major defaulters are of 60 months debt.



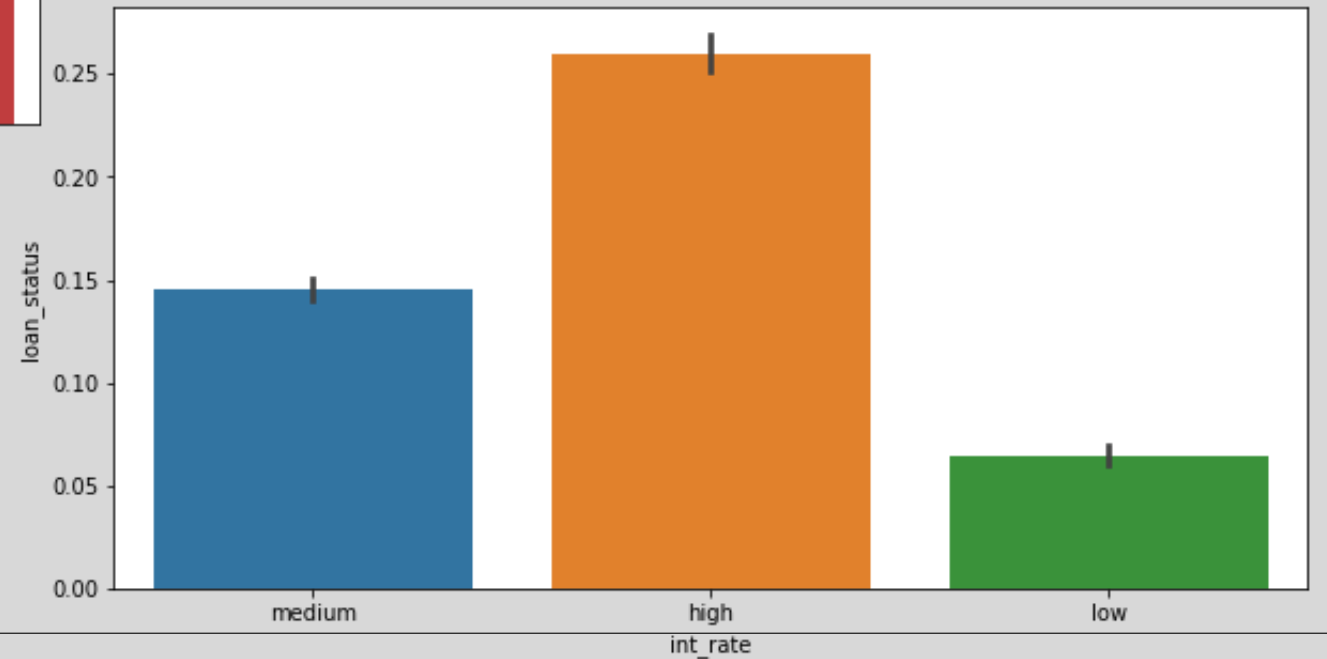
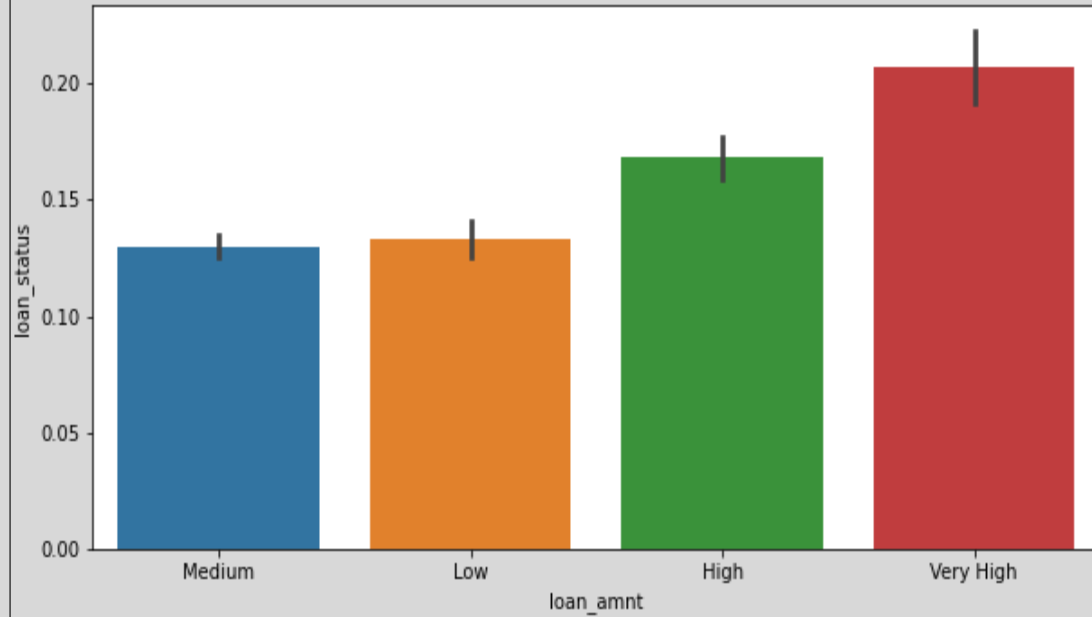
- The shocking analysis was the LC verified people are more in default.



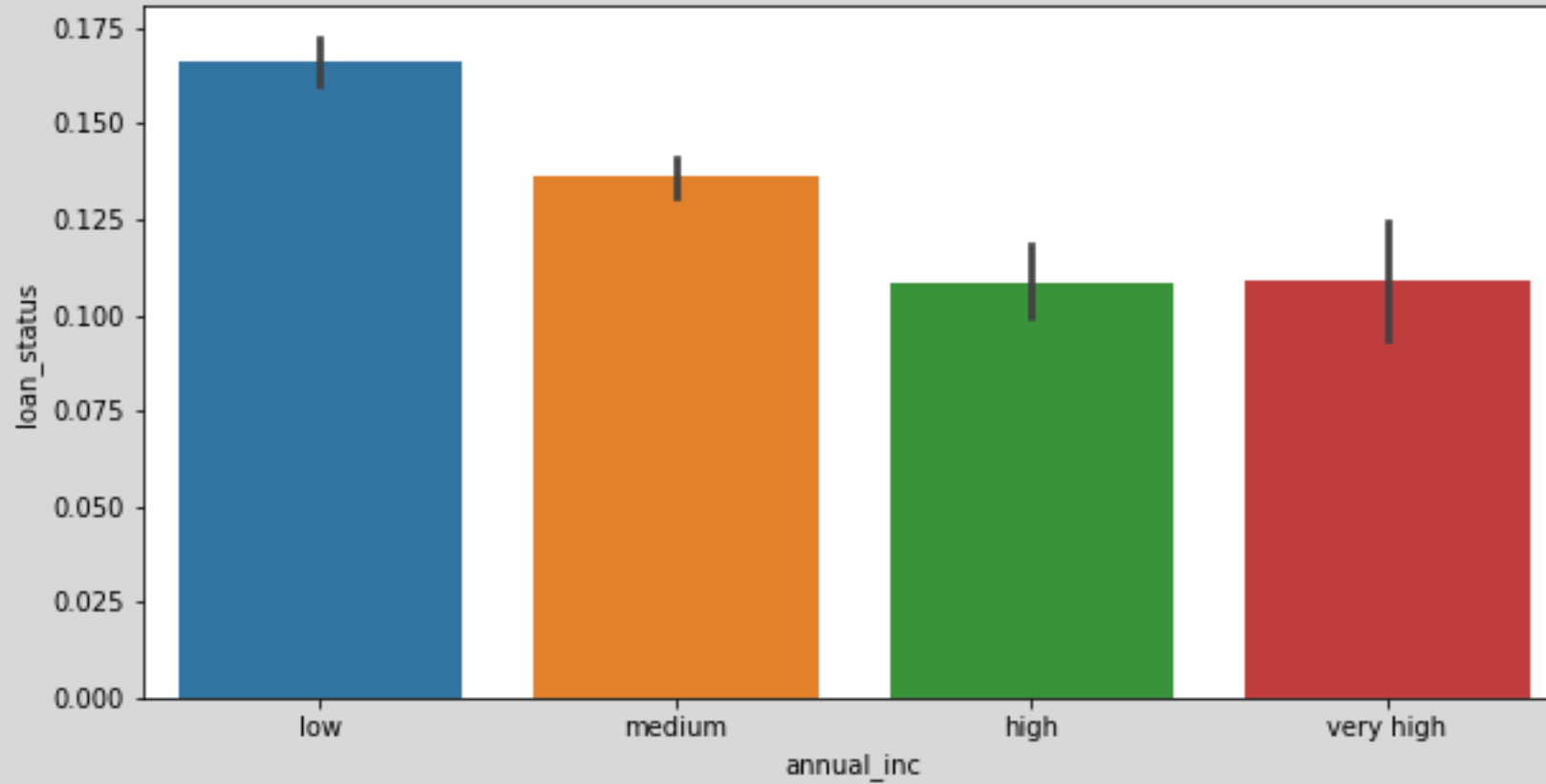
- When we analyzed this rate according to time. We got the rate was decreasing up to 2010 but it eventually increased in 2011.



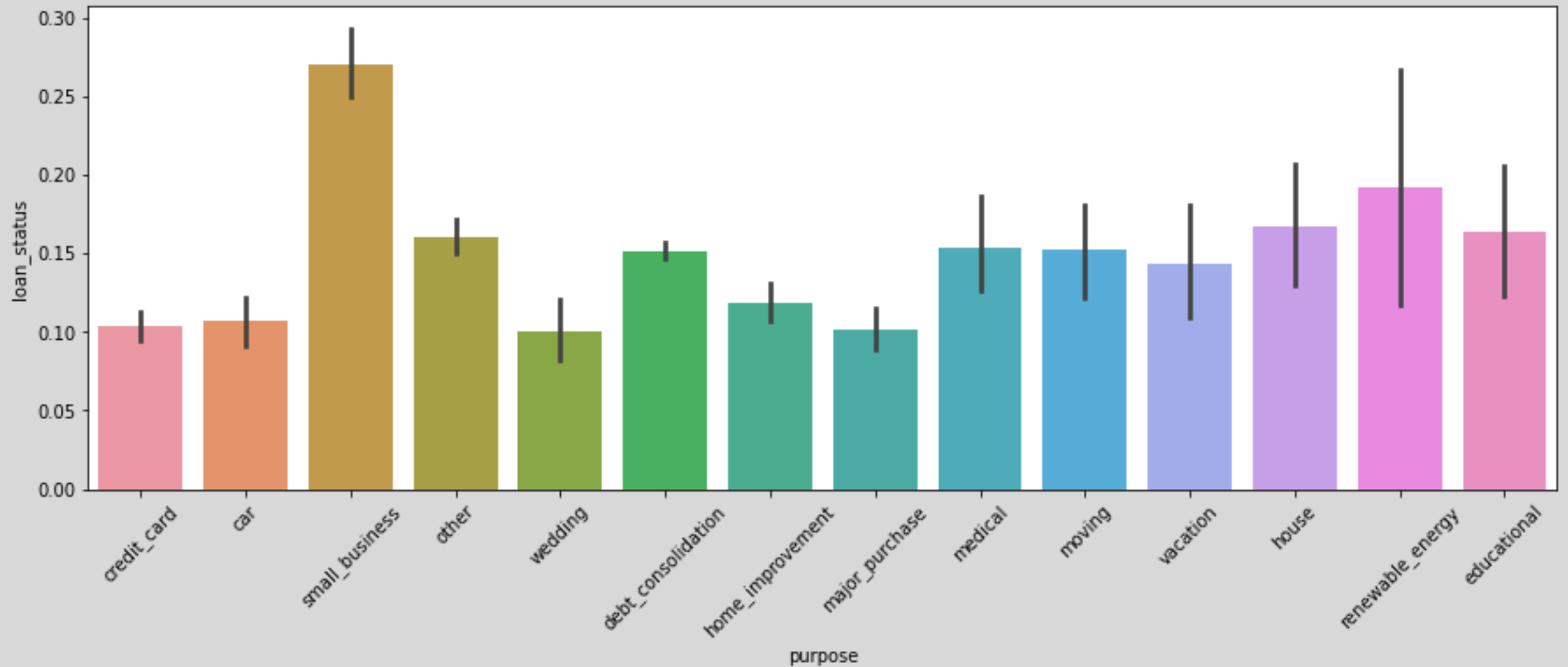
- Another report says more the loan amount and more the interest rate the default rate is more.



- Annual income also affects the number of defaulters.



- Another result was of purpose for which loan is taken.
- The small business got the major defaulters.



From these analysis we came to some conclusions where bank should think twice before approving loan:

- Make a category of loan amount to be granted according to the annual income of person.
- Make the interest rate in the medium range so people would pay at given time.
- If small business are applying are loan first verify the sales or revenue of company according to that numbers grant the loan. So there will be less possibility of being defaulter.