

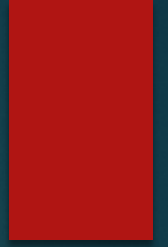


Lending Club Case Study Analysis

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Problem Statement

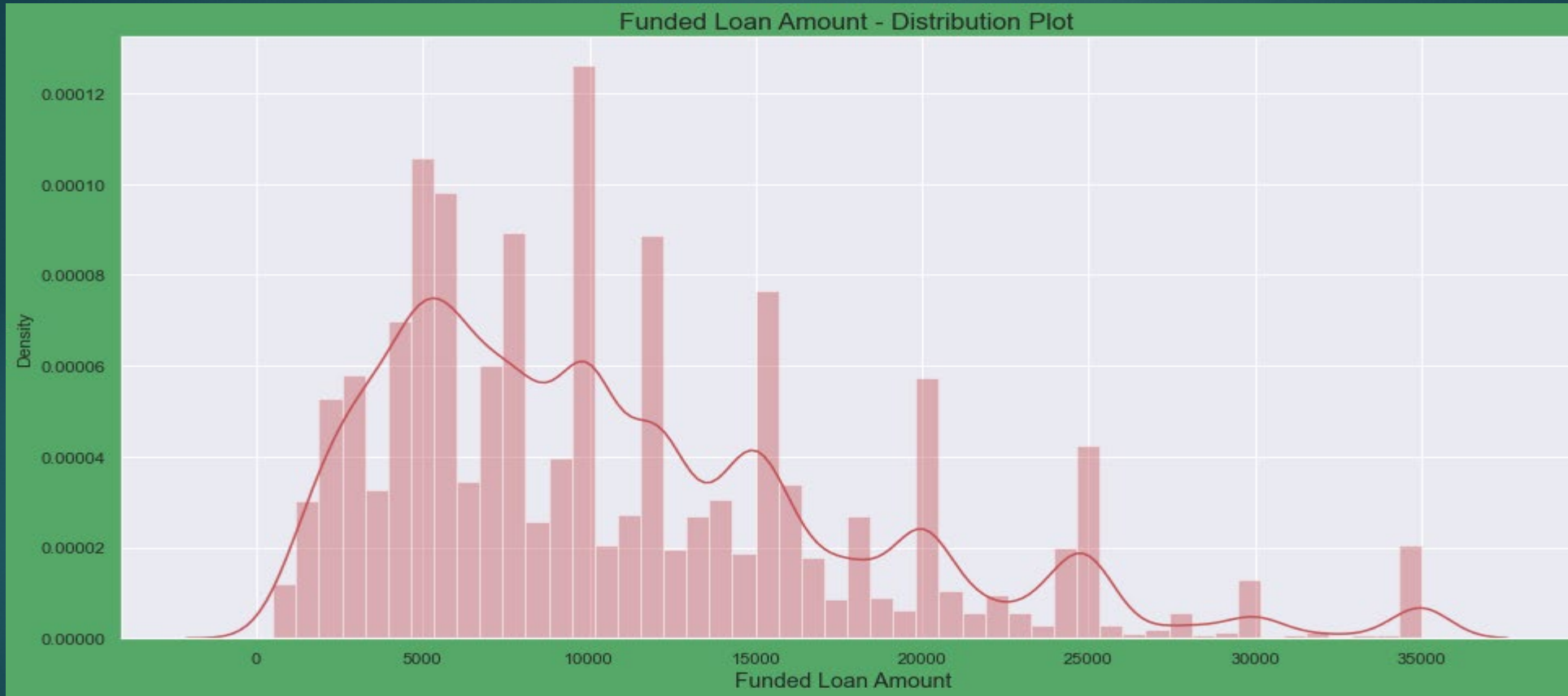


- ▶ ☐ Need to analyse the Lending club data which has the information of loan status for the year 2007 to 2011.
- ▶ ☐ Need to analyse the data and find insight that which types of borrowers use to pay full
- ▶ loan and which type of borrowers are charged off.
- ▶ ☐ This will help the company to grow the business by approving loan to eligible
- ▶ borrowers and rejecting those who can't pay(charged off)

Approach of Analysis

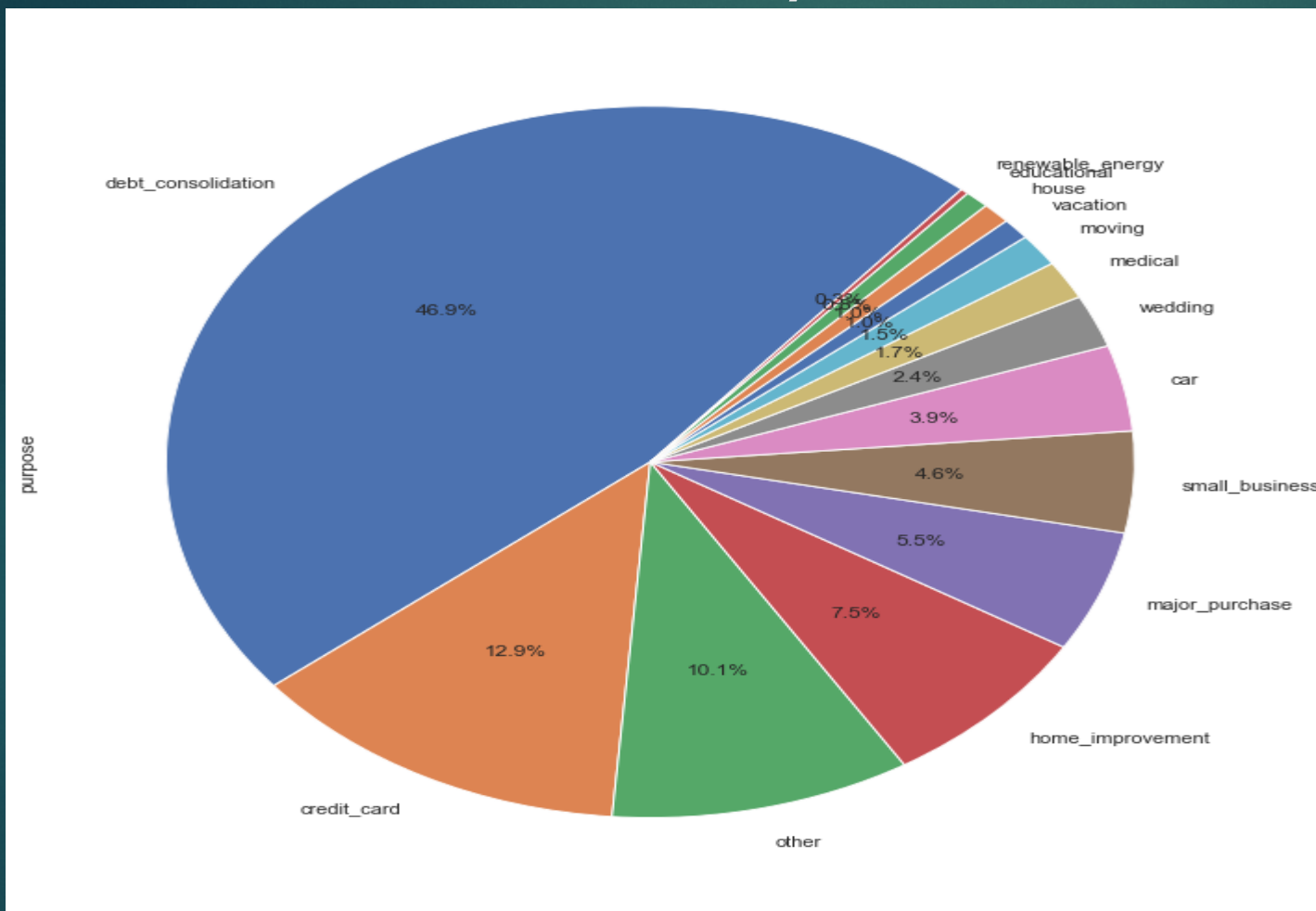
- ☐ Data Cleaning
- ☐ Deriving Metrics
- ☐ Univariate Analysis
 - Segmented Univariate Analysis
- ☐ Bivariate Analysis
- ☐ Multi-variate Analysis

Univariate Analysis



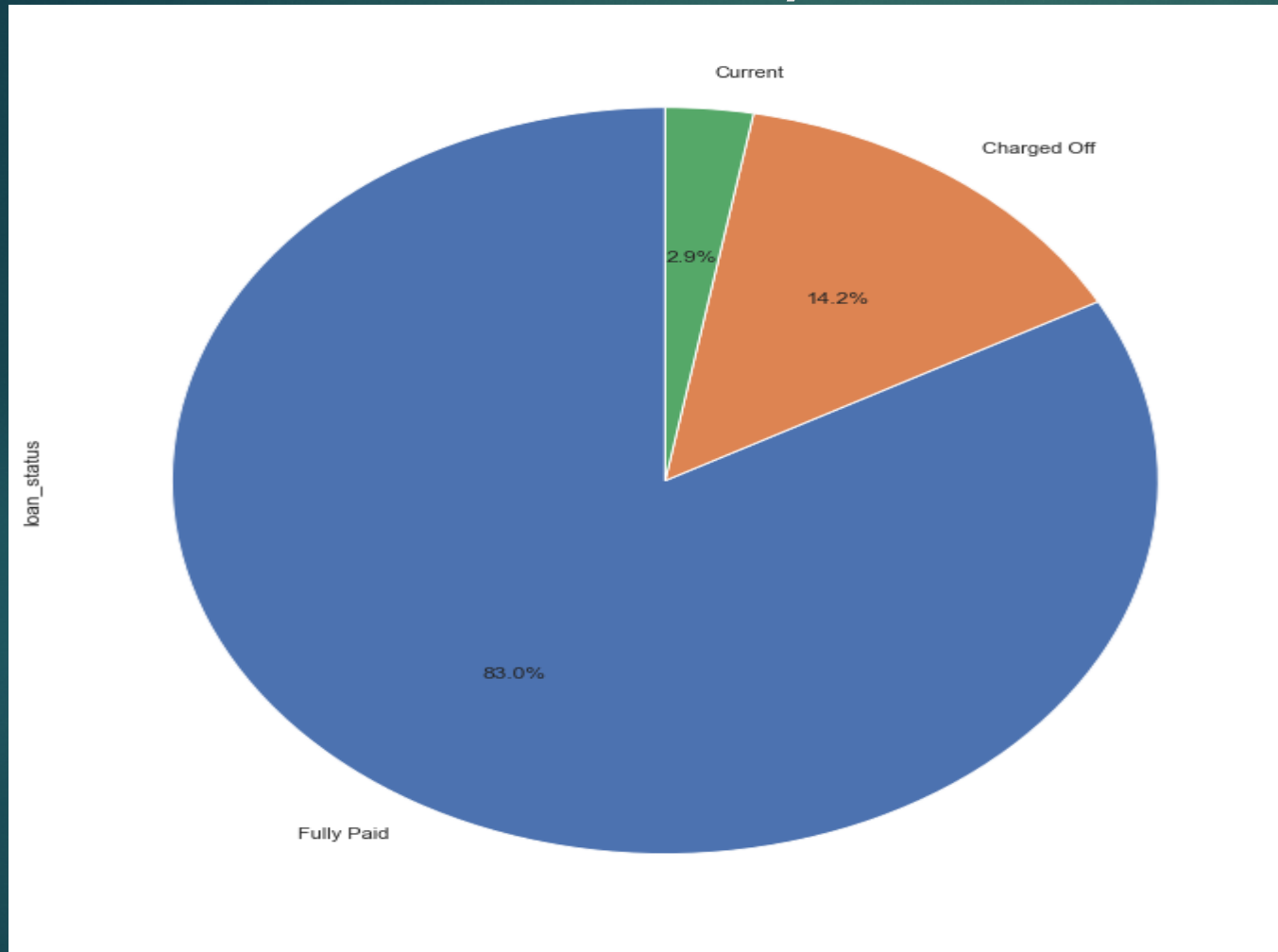
□ # Observation : Majority of borrowers funded_amount is between 5000-10000.

Univariate Analysis



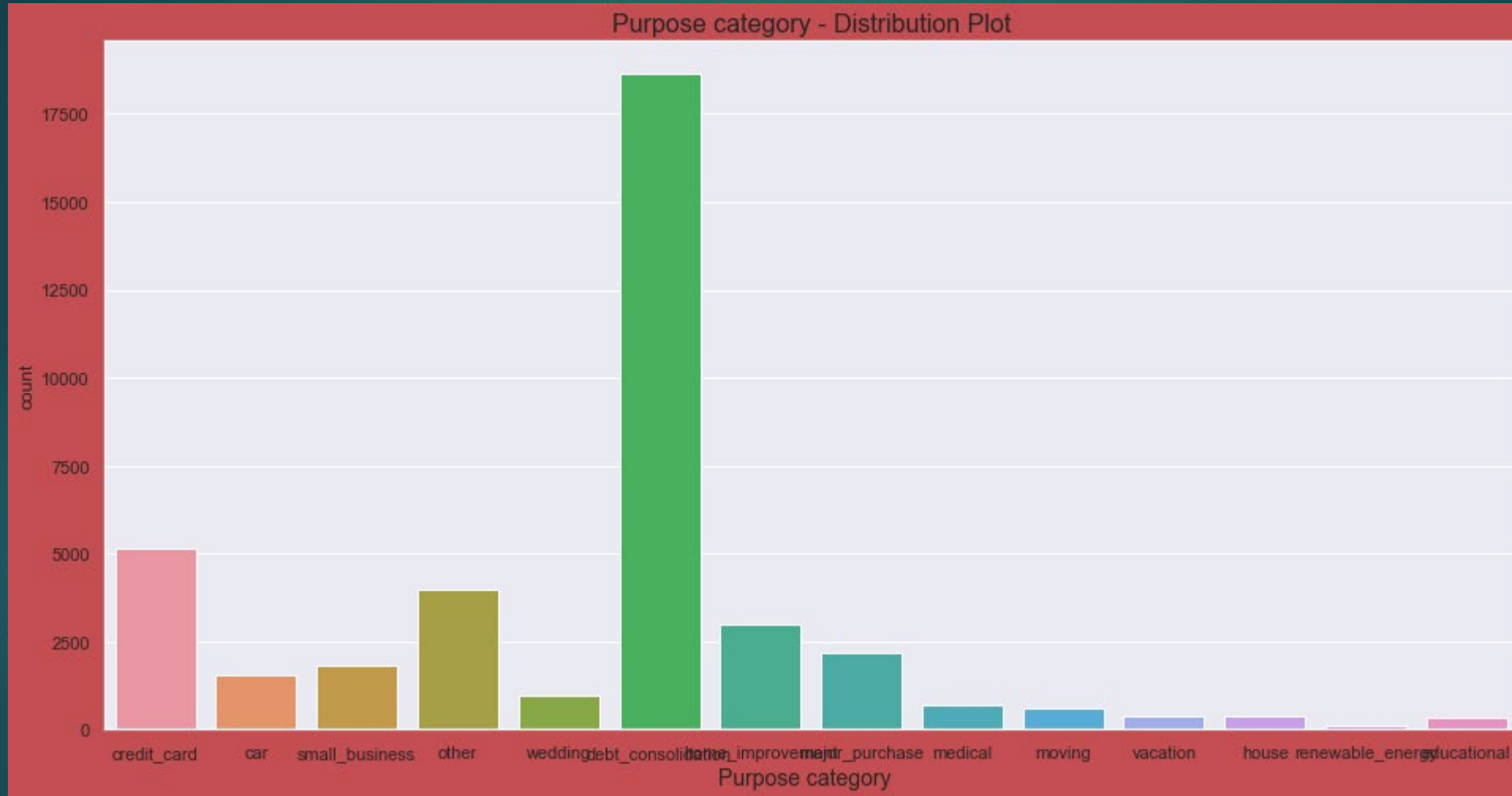
Observation : From the above pie_chart we observed 46.9% borrower have taken loan for "Debt_consolidation" followed by 12.9% for "credit_card"

Univariate Analysis



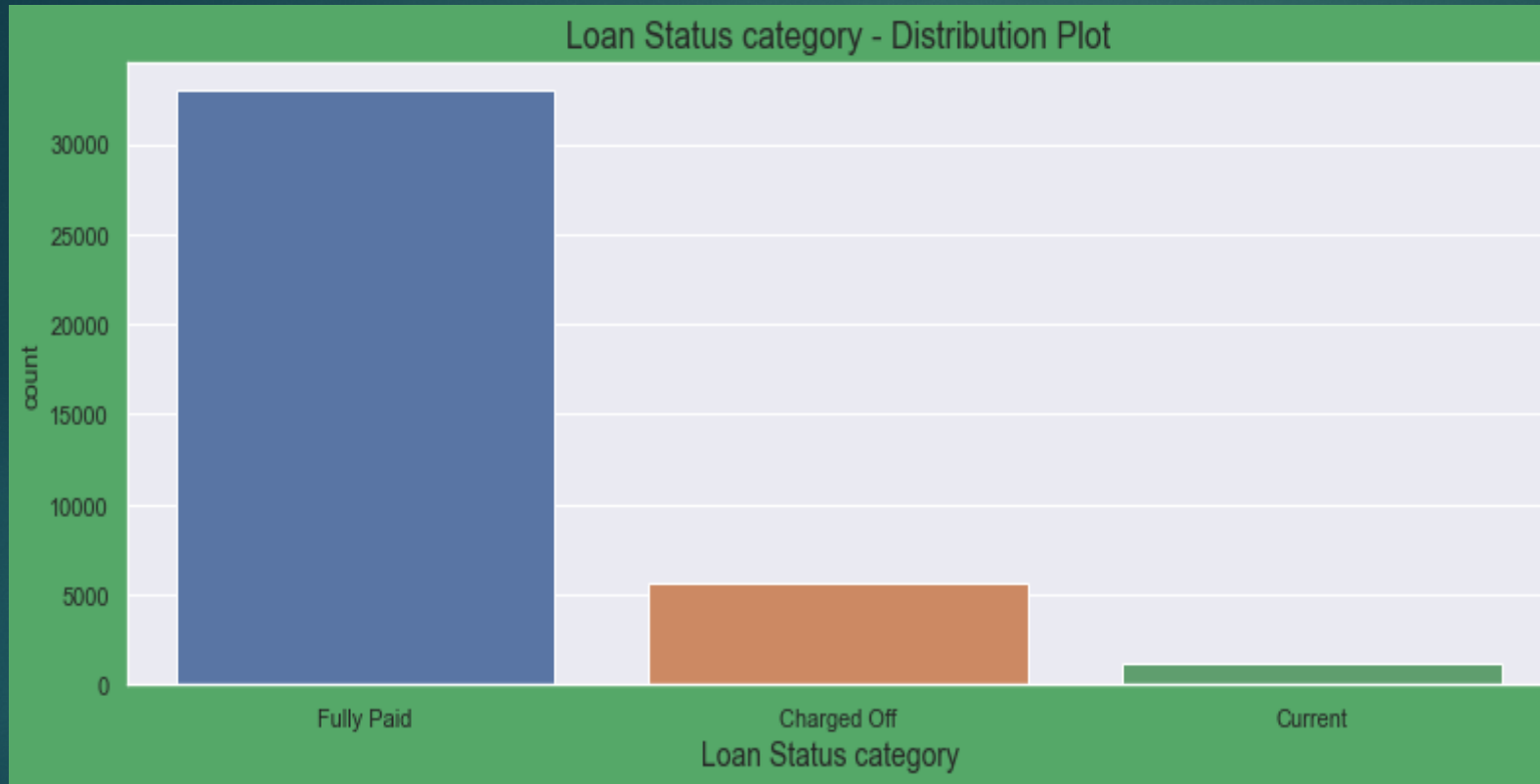
Observation : Maximun borrowers paid their full loan ie:83%, while 14.2% of borrowers are charged off and 2.9% borrowers still paying their loan.

Univariate Analysis



Observation : From above count plot maximum people take loan for debt_consolidation purpose followed by credit card

Univariate Analysis



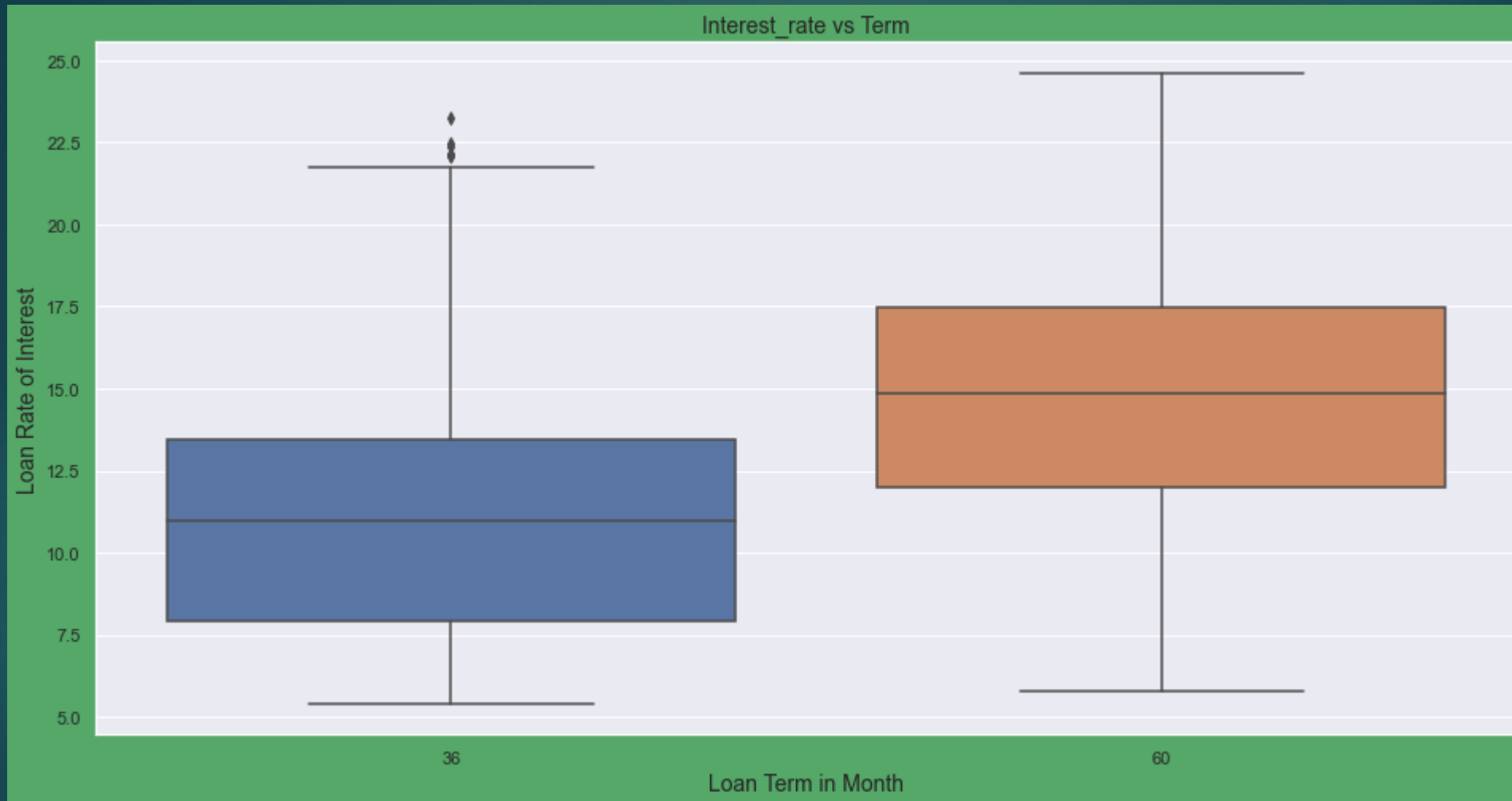
Observation : From the above countplot we can observe that around 32000 borrower has Fully_paid their loan while around 6000 borrower are Charged_off(debt is overdue) and around 500 borrower loan is still in processes.

Segmented Univariate Analysis

emp_length	loan_amnt	int_rate	annual_inc	dti	revol_util
0	8625.139535	10.897842	45986.771163	12.956456	42.708967
1	9869.417103	11.980584	61599.257190	12.769702	48.589496
2	10262.374658	12.074045	63274.654284	13.103719	48.636190
3	10738.278388	12.019673	66787.176313	13.163175	48.216542
4	10977.408324	12.173417	66583.750873	13.187616	49.412937
5	11287.035344	12.035268	68225.197441	13.421825	48.331106
6	11494.952894	12.070314	68184.612831	13.821350	49.591449
7	11739.495206	12.174969	69153.087986	13.674473	49.686317
8	11887.998648	11.906302	74590.461799	13.773793	48.318404
9	12011.625596	11.913060	74474.421304	13.540310	48.783935
10	13089.970717	12.094797	81706.525735	13.716438	49.584756

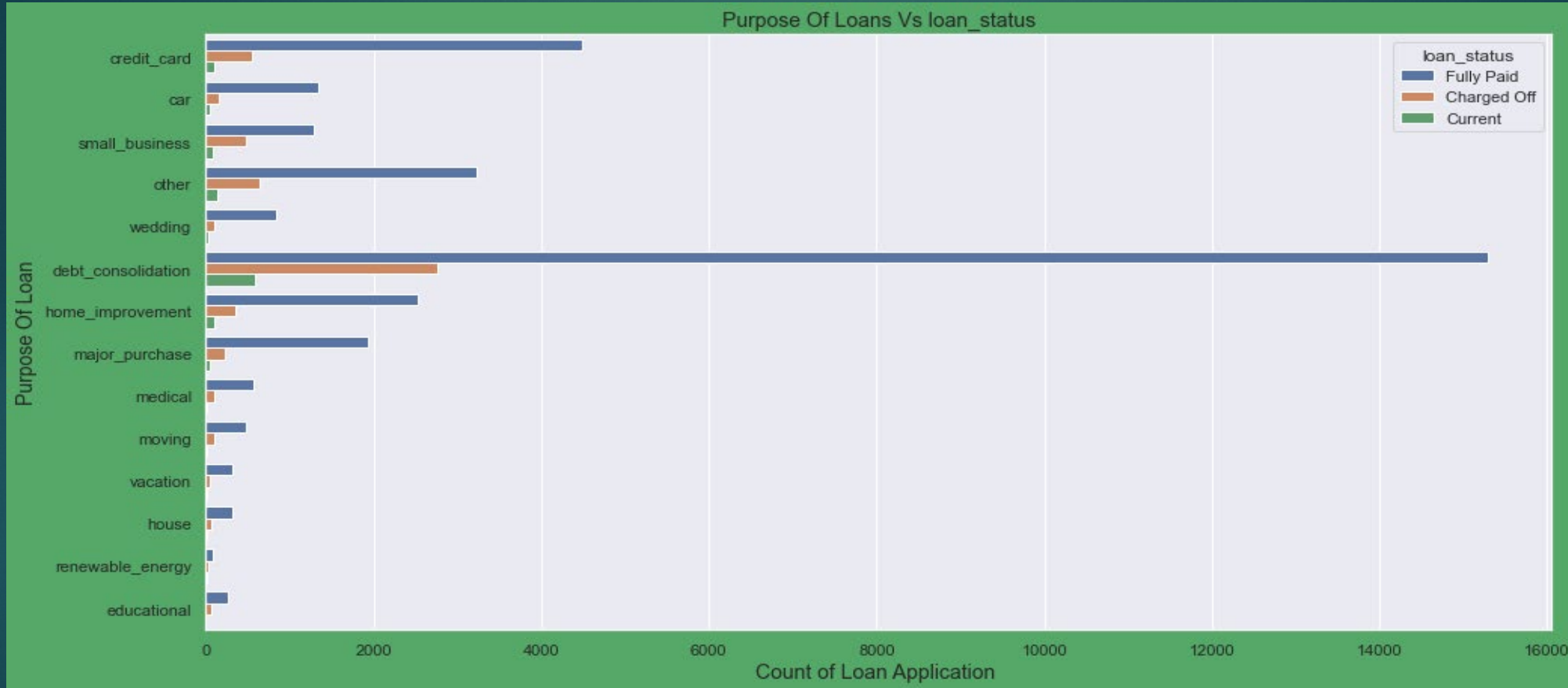
Observation : With the increase of the working experience the annual income of the borrower increases along with loan amount

Bivariate Analysis



Observation : From the box plot we observe that borrower taken loan for longer duration i.e:60_months have assign high interest_rate as compare to 36_months.

Bivariate Analysis



Observation : As most borrower have taken loan for debt_consolidation there is a high number of Fully_Paid status in debt_consolidation and Charged_Off.

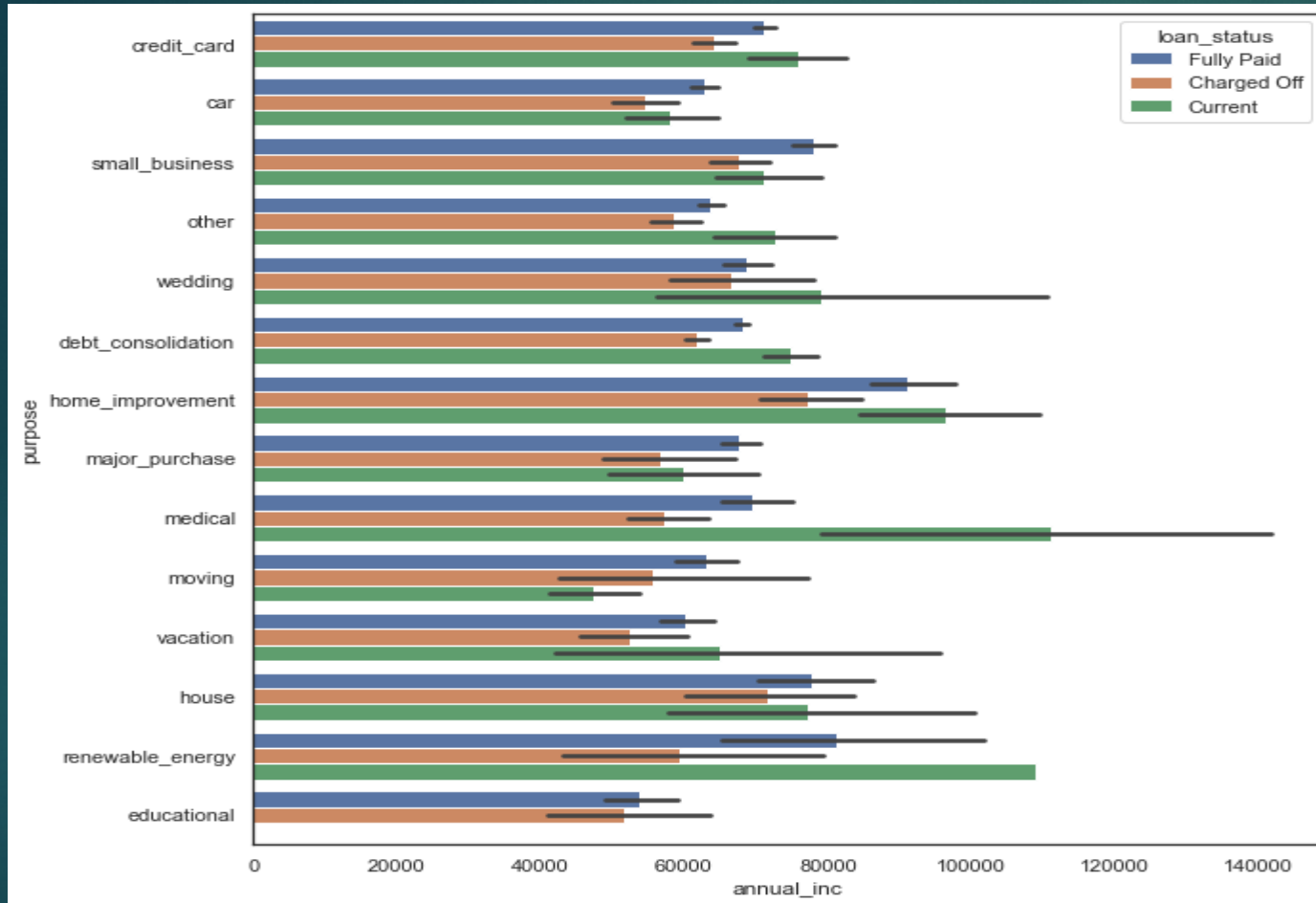
Bivariate Analysis



Observation :

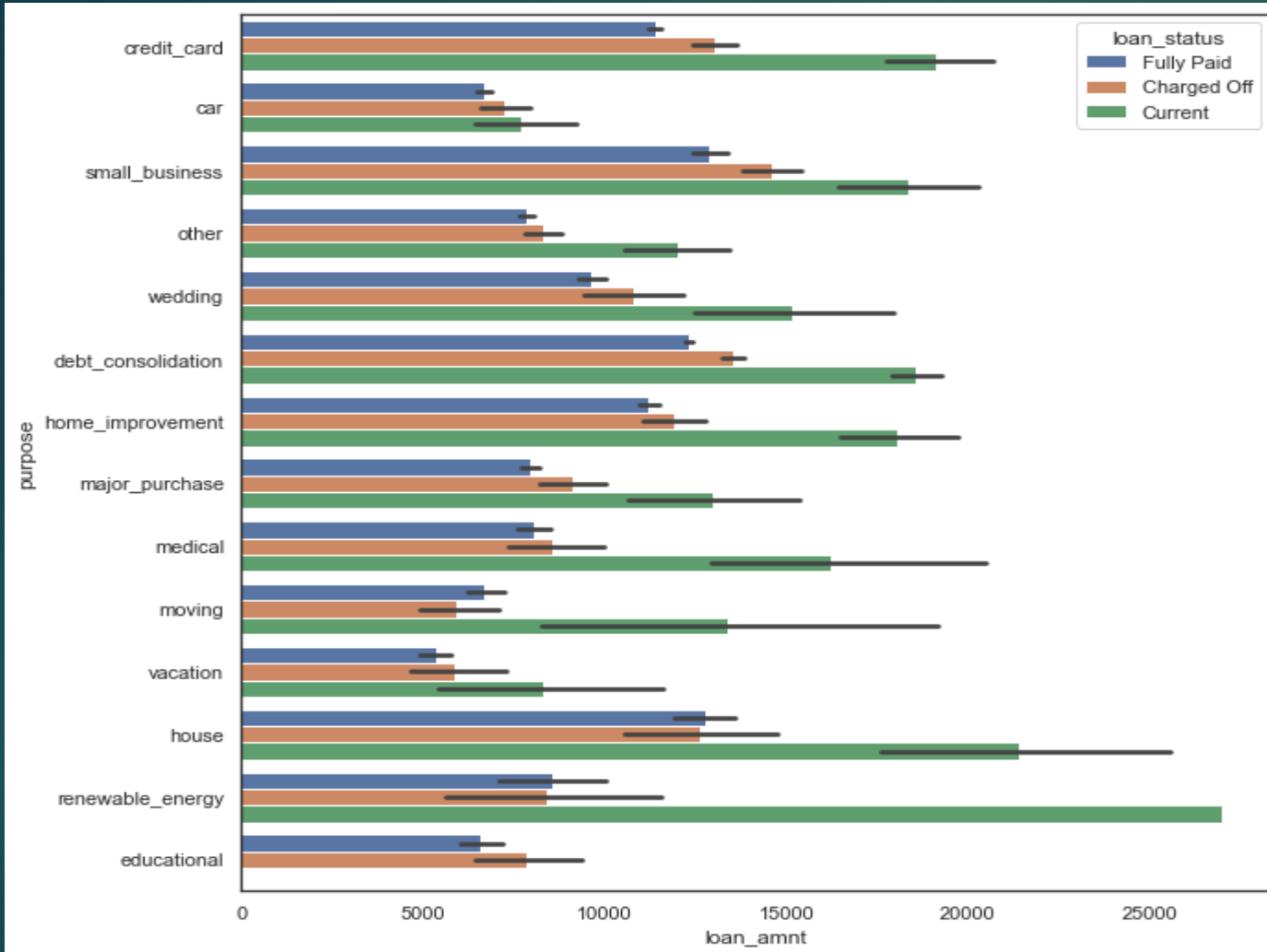
- 1) The highest proportion of the borrowers use to live in rented housing followed by mortgage house
- 2) Maximum charged of borrowers lives in a rented house
- 3) Borrowers with own house takes less number of loans in comparison to rented and mortgage borrowers

Multivariate Analysis



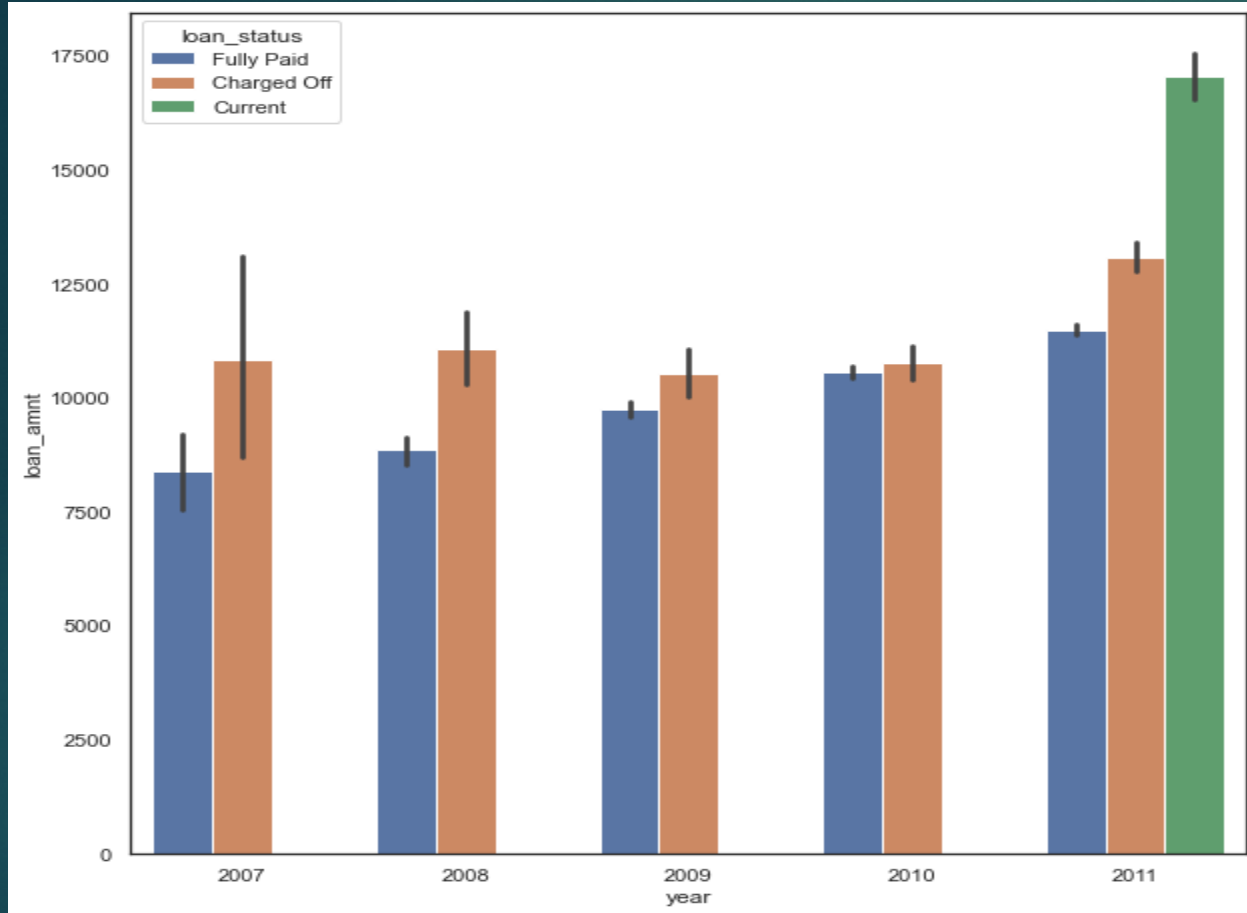
Observation : Borrower with higher salary mostly applied loans for "home_improvement", "house", "renewable_energy" and "small_businesses"

Multivariate Analysis



Observation : Among all the purpose of loan the majority of the loan are there in current state, with higher loan amount in comparison to other purposes

Multivariate Analysis



Observation :

- 1) The fully_paid borrowers increases continuously increase from year 2007 to 2011.
- 2) It has been observed every year between 2007 to 2011 the number of charged off borrower is more than the number of fully paid borrowers