

# Lending Club Case Study

By

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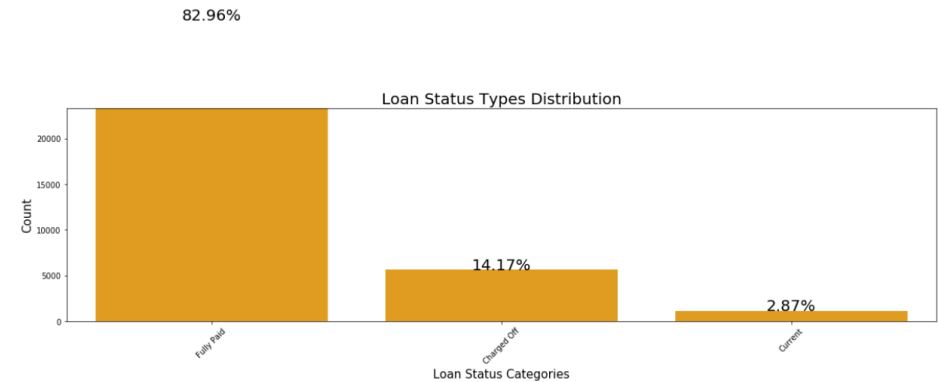
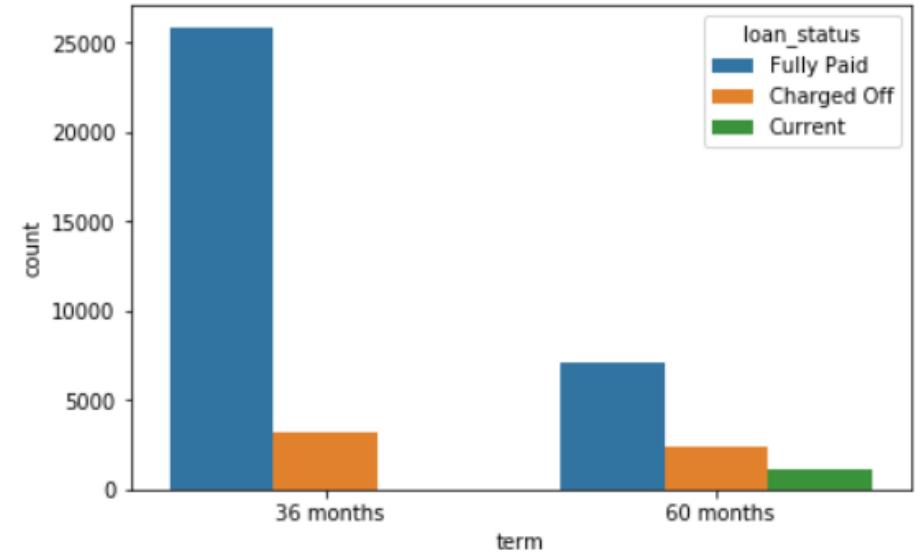


# Problem Statement

Lending Club company wants to understand the driving factors (or variables) behind loan default, i.e. factors strongly associated with default. This knowledge can be used for portfolio management and risk assessment on the bad loan by the company.

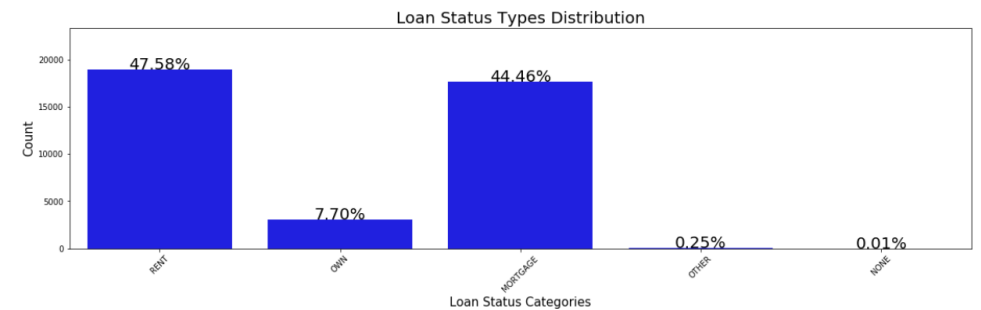
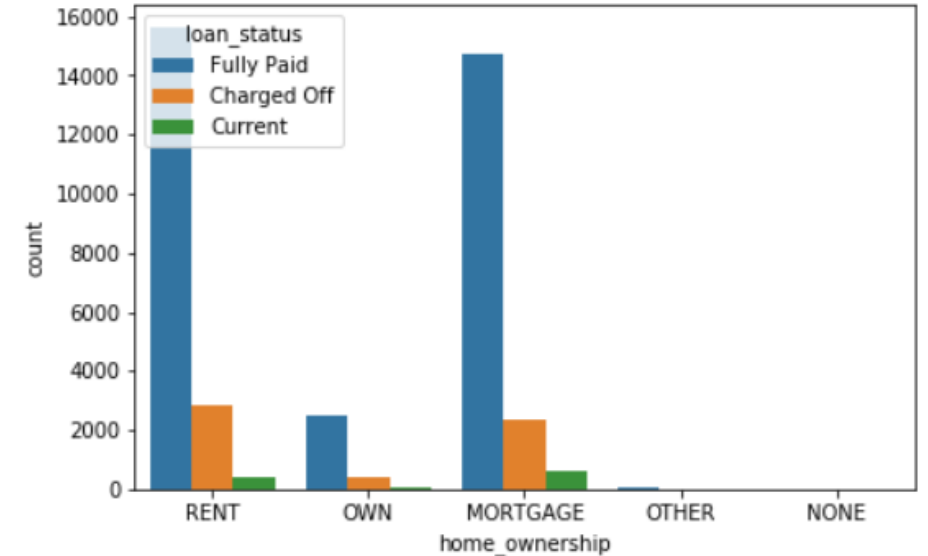
# Analysis and Conclusion

- In order to make a thorough analysis of the data, let us start by stating that almost 83 % of the loans availed were fully paid and only 14% of the loans were charged off. When the repayment period is 36 months, the chances of repaying the loan are good.



# Analysis and Conclusion

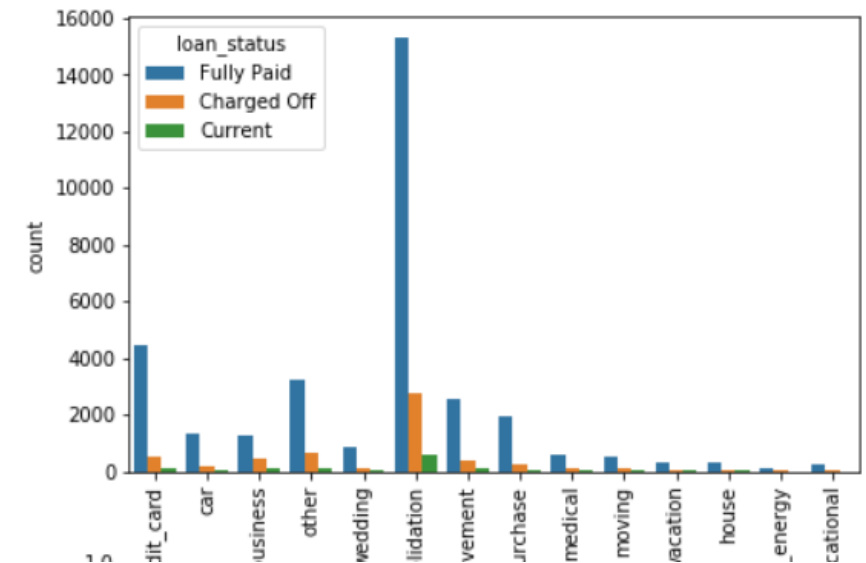
- It has been found that most of the borrowers are from rented homes and homeowners with mortgages and that charge-off cases are more prevalent among rented home borrowers.



# Analysis and Conclusion

- It is recommended that the company should cross-check the borrowers if the purpose of the loan is to consolidate debt, as there is a substantial risk of default.

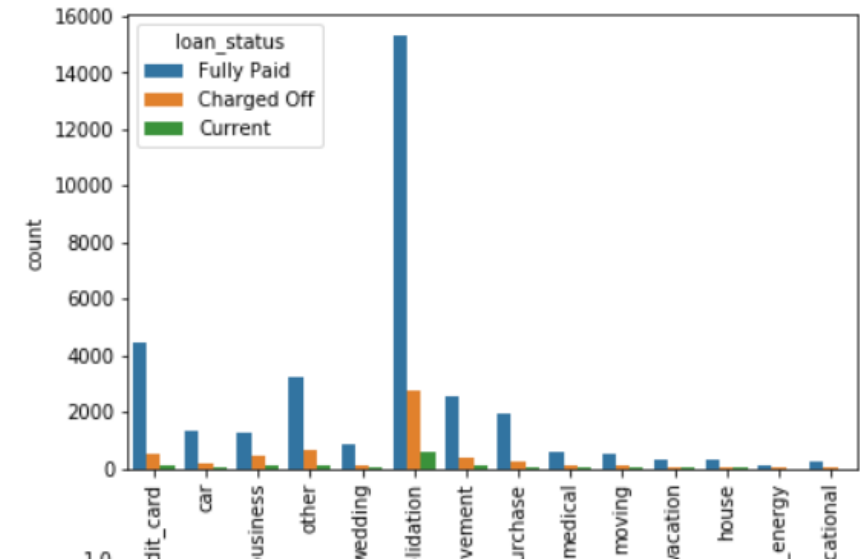
loan_status	Charged Off	Current	Fully Paid
purpose			
car	2.84	4.39	4.06
credit_card	9.63	9.04	13.61
debt_consolidation	49.17	51.4	46.4
educational	1	0	0.82
home_improvement	6.17	8.86	7.67
house	1.05	1.23	0.93
major_purchase	3.95	3.25	5.85
medical	1.88	1.05	1.75
moving	1.63	0.61	1.47
other	11.25	11.23	9.81
renewable_energy	0.34	0.09	0.25
small_business	8.44	6.49	3.88
vacation	0.94	0.53	0.98
wedding	1.71	1.84	2.52



# Analysis and Conclusion

- The fourth conclusion is that borrowers who take loans for a wedding, car, credit card, house improvement, or major purchase look promising since they have good repayment capacity.

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# Analysis and Conclusion

- The interesting point is there are some states which contribute more in borrowing and the business can be expanded on those regions, to name a few, CA, TX, NY, etc

NC	0.29	0.1	1.6
NE	0.01	0	0.01
NH	0.06	0.01	0.36
NJ	0.7	0.15	3.81
NM	0.08	0.02	0.39
NV	0.27	0.05	0.93
NY	1.25	0.29	8.06
OH	0.39	0.11	2.58
OK	0.1	0.03	0.62
OR	0.18	0.04	0.92
PA	0.45	0.12	3.24
RI	0.06	0.01	0.43
SC	0.17	0.03	0.99
SD	0.03	0.01	0.13
TN	0.01	0	0.04
TX	0.8	0.17	5.9
UT	0.1	0.02	0.53
VA	0.45	0.1	3
VT	0.02	0	0.12
WA	0.32	0.06	1.74
WI	0.16	0.05	0.95
WV	0.05	0.01	0.38
WY	0.01	0.01	0.19

loan_status	Charged Off	Current	Fully Paid
addr_state			
AK	0.04	0.01	0.16
AL	0.14	0.04	0.96
AR	0.07	0.03	0.52
AZ	0.31	0.08	1.83
CA	2.83	0.38	14.66
CO	0.25	0.07	1.68
CT	0.24	0.06	1.59
DC	0.04	0.01	0.49
DE	0.03	0	0.25
FL	1.27	0.21	5.73
GA	0.54	0.1	2.88
HI	0.07	0.02	0.35
IA	0	0	0.01
ID	0	0	0.01
IL	0.5	0.12	3.23
IN	0	0	0.02
KS	0.08	0.04	0.56
KY	0.11	0.04	0.67
LA	0.13	0.02	0.94
MA	0.4	0.11	2.87
MD	0.41	0.07	2.17

**Thank you**