LENDING CLUB

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PROBLEM STATEMENT

identify patterns which indicate if an applicant applies for Loan with Lending Club, then:

- is he/she the suite prospect for Business

- Or the applicant is too risky for Business. If its too risky
  - then such loans can be reduced
  - Denied
  - charged at higher rates
  - duration shortened

CONSIDERATIONS

From the data proposed we found out that loan applicants which have fully paid their loans or being charged off need to be considered for analysis with additional information mentioned below in various combinations:

- Home Ownership

- Verification Status

- funded_amnt_inv

- Term

- int_rate

- emp_length

- Grade

- pub_rec_bankruptcies

- Current DTI ratio

UNIVARIATE CHART
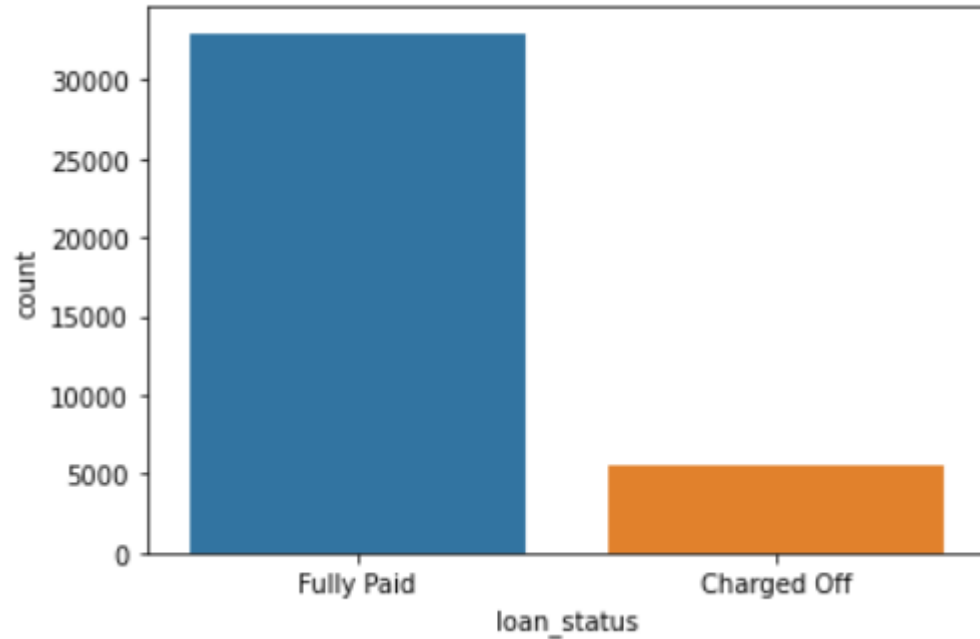
In this chart we find that most of the loan applicants in the data set available have fully paid the loans. And its around 1/6th of total number of members who have been charged off.

UNIVARIATE CHART

In this chart we find that maximum number of loan applicants in the data set available are either on Rent or have Mortgage along.
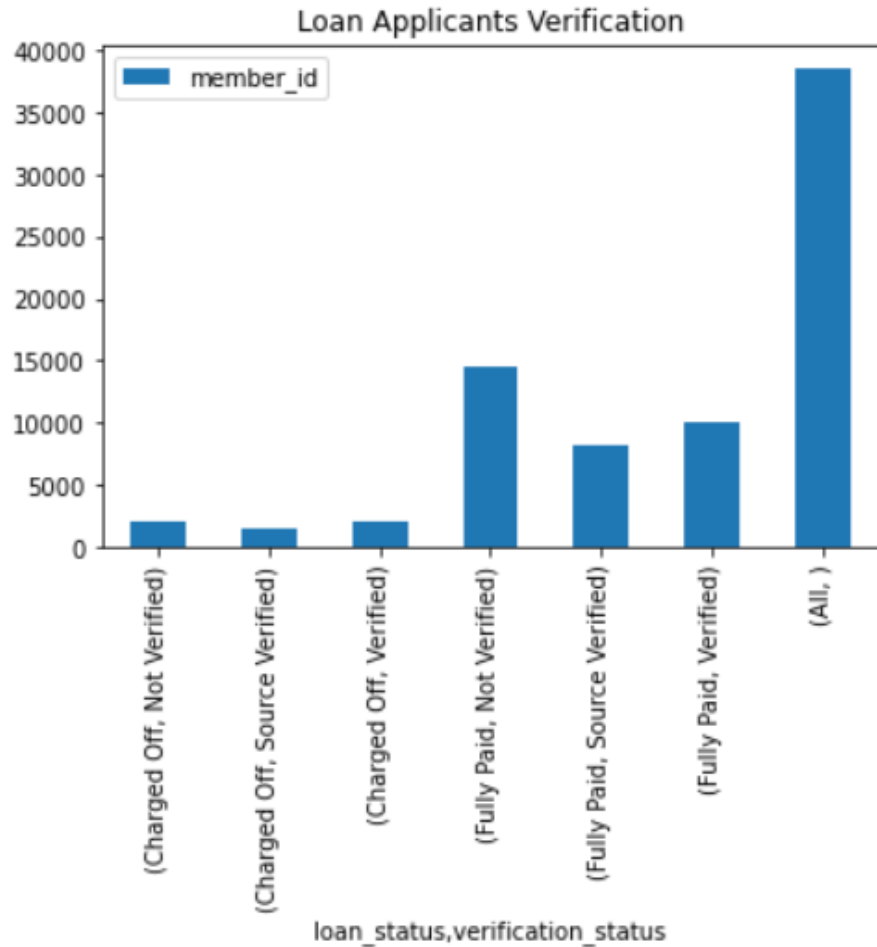
BIVARIATE CHART
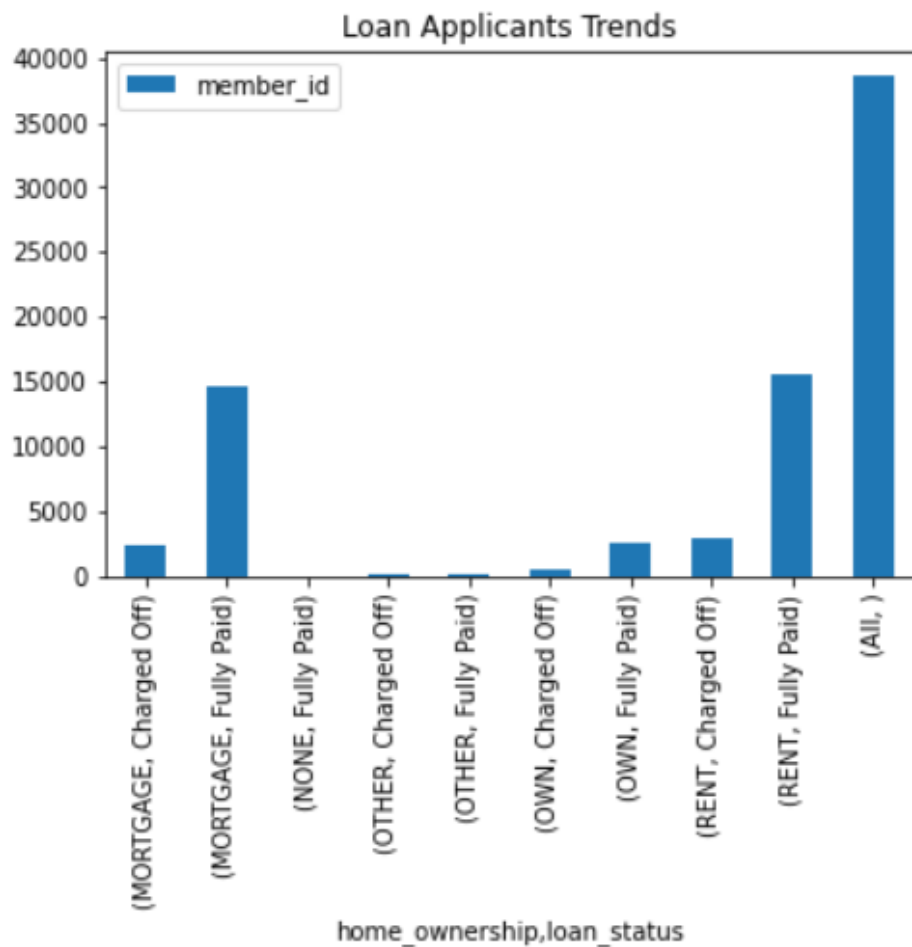
In this chart we can easily find that maximum number of Loan Applicants with Home Ownership as "Mortgage" or "Rent" have Fully Paid the loan.

Just after that if we look for Charged Off Loans the numbers are from the members who are on either on Rent or have a Mortgage.

BIVARIATE CHART

Loan Applicants Verification

- In the below chart we can easily find that maximum number of Loan Applicants were not verified properly. Even thought the number of members under non verified ones have fully paid however, the compliance is not followed properly which may lead to future risks.

- We also see that there are good number of Non-Verified applicants/members which have been charged off too.

- Also, if there is a good number of members who were verfied and even then, we had few loans charged off. So there, data need to be looked in more detail that what circumstance were observed.
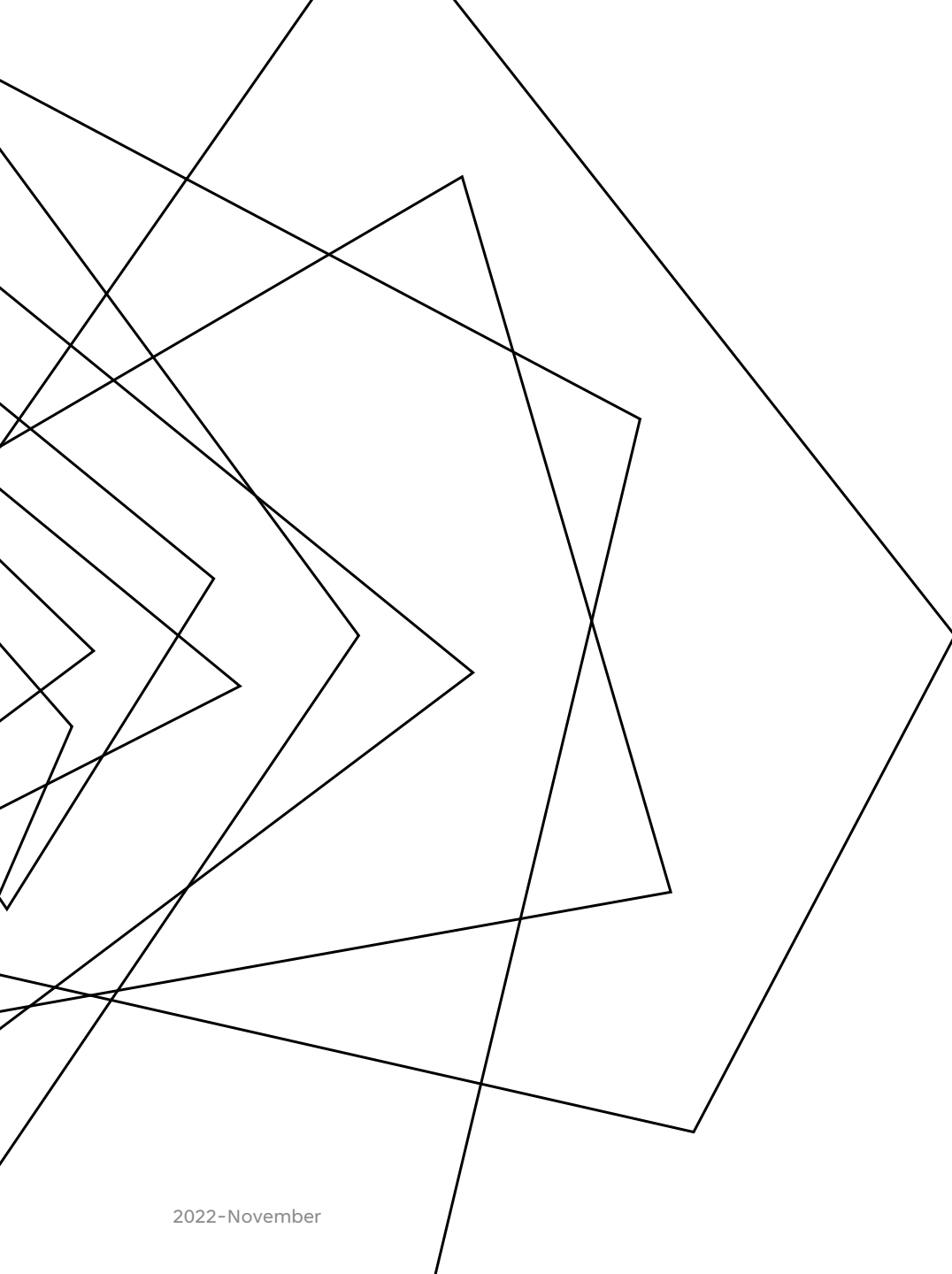
MULTI-VARIATE CHART

	member_id	loan_amnt	funded_amnt	funded_amnt_inv	installment	annual_inc	dti	delinq_2yrs	revol_bal	pub_rec_bankruptcies
member_id	1.00	0.12	0.13	0.24	0.07	0.01	0.09	-0.01	-0.00	-0.01
loan_amnt	0.12	1.00	0.98	0.94	0.93	0.27	0.06	-0.03	0.31	-0.04
funded_amnt	0.13	0.98	1.00	0.96	0.96	0.26	0.06	-0.03	0.31	-0.04
funded_amnt_inv	0.24	0.94	0.96	1.00	0.91	0.25	0.07	-0.04	0.29	-0.04
installment	0.07	0.93	0.96	0.91	1.00	0.27	0.05	-0.02	0.31	-0.03
annual_inc	0.01	0.27	0.26	0.25	0.27	1.00	-0.12	0.02	0.28	-0.02
dti	0.09	0.06	0.06	0.07	0.05	-0.12	1.00	-0.03	0.23	0.01
delinq_2yrs	-0.01	-0.03	-0.03	-0.04	-0.02	0.02	-0.03	1.00	-0.05	0.00
revol_bal	-0.00	0.31	0.31	0.29	0.31	0.28	0.23	-0.05	1.00	-0.05
pub_rec_bankruptcies	-0.01	-0.04	-0.04	-0.04	-0.03	-0.02	0.01	0.00	-0.05	1.00

CONCLUSION

From the data analysis done so far, its found that there is around 1/6th of the total number of members (of data set considered) have been charged off and mostly they were on Rent or had Mortgage and were Not Verified.

A lot of non - compliance count was found related to loan applicant's verification process.

THANK YOU