

# Lending Club Case Study

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# PROBLEM STATEMENT

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- The aim is to identify patterns in which indicate if a person is likely to Default.

**On the basis of pattern , we can take decision whether:**

1. Loan Should be denied.
2. Reducing the Loan Amount.
3. Increasing the Interest Rate.

# ANALYSIS APPROACH

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## **1. Loan Status has 3 Outputs:**

- Fully Paid
- Current
- Charged Off

## **2. We ran analysis through multiple variables columns to find its relation with Charged off%:**

# TOP PARAMETERS FOR LOAN DEFAULTER

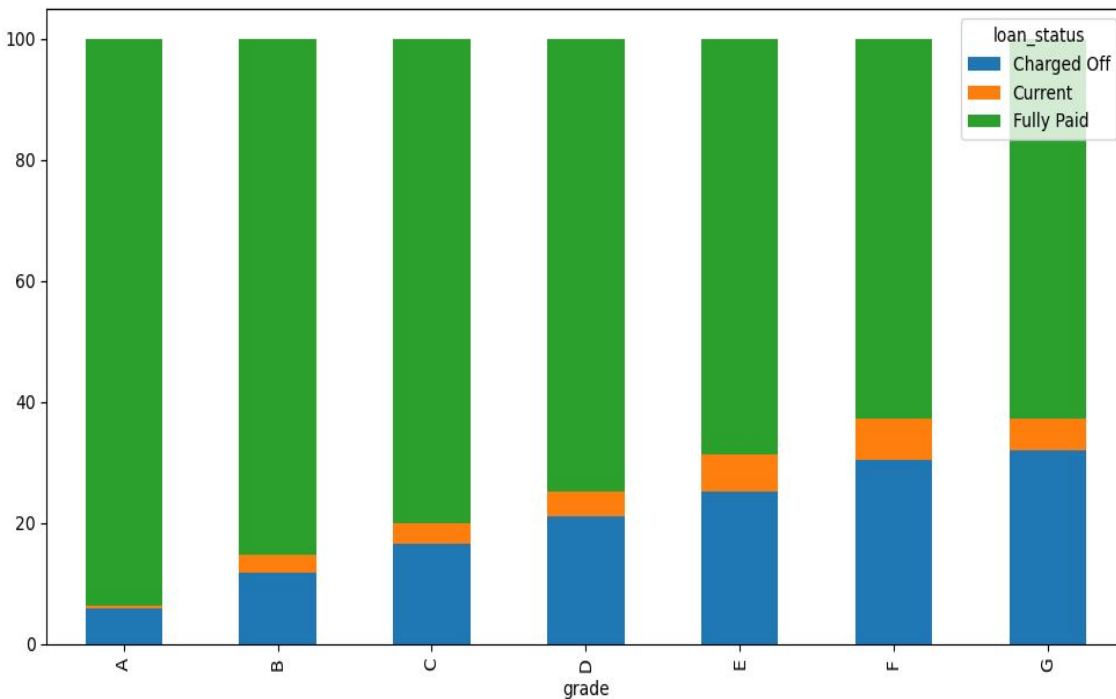
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1. Purpose of Loan
2. Grade
3. Home Ownership
4. Verification
5. Income
6. DTI

# ANALYSIS

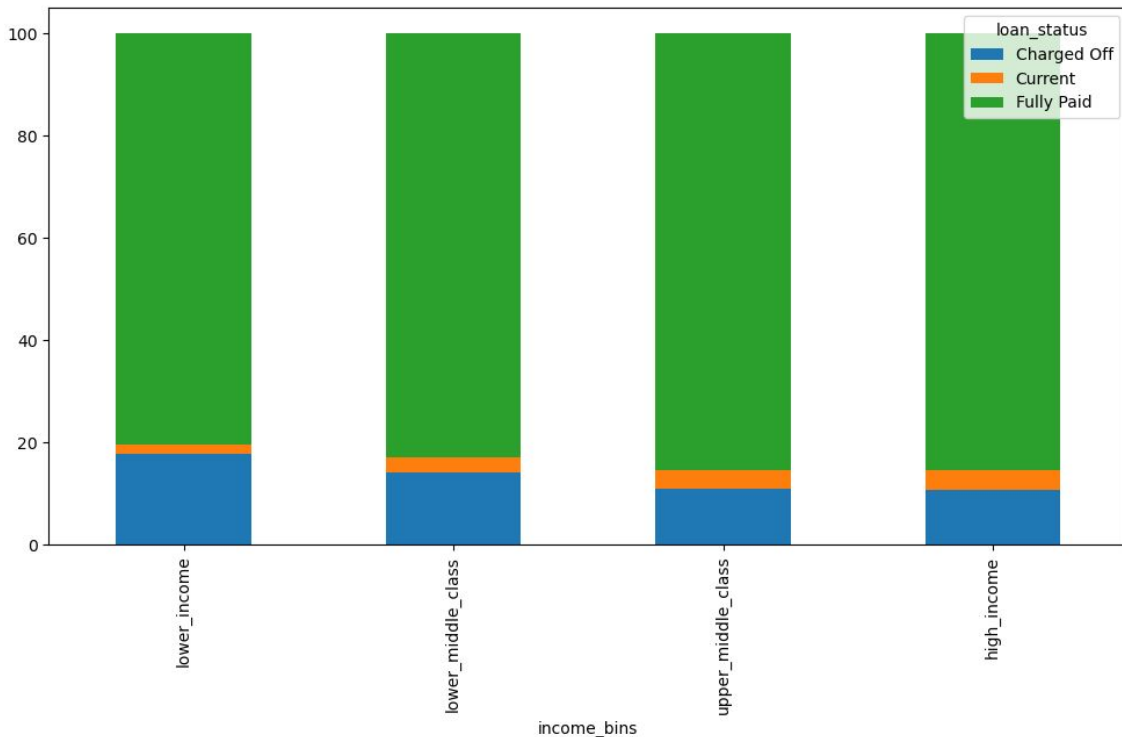
# Loan Status vs Grade

- a) The Graph Shows in Percentage for the contribution in both charged off & Fully Paid.
- b) The Percentage of Charged off is increasing from grades A to G.



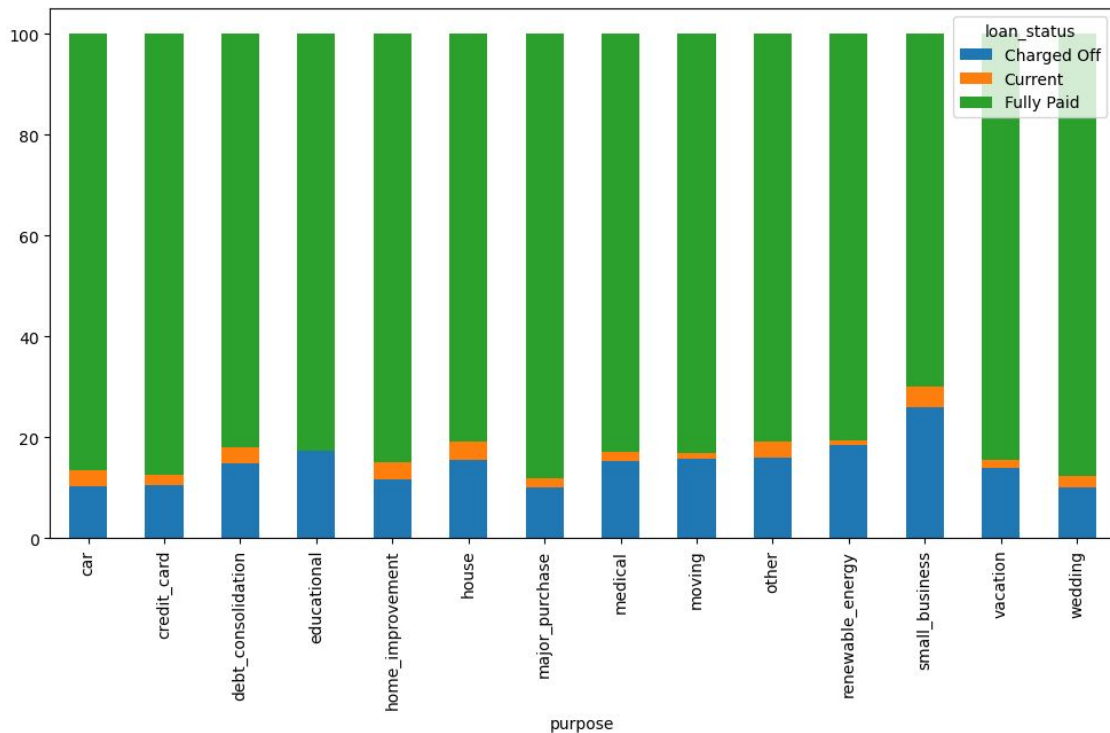
# Loan Status vs Annual Income

- a) The Graph Shows in percentage for the contribution in both charged off & Fully Paid.
- b) The percentage of Charged off is decreasing from income level lower to higher.



# Loan Status vs Purpose

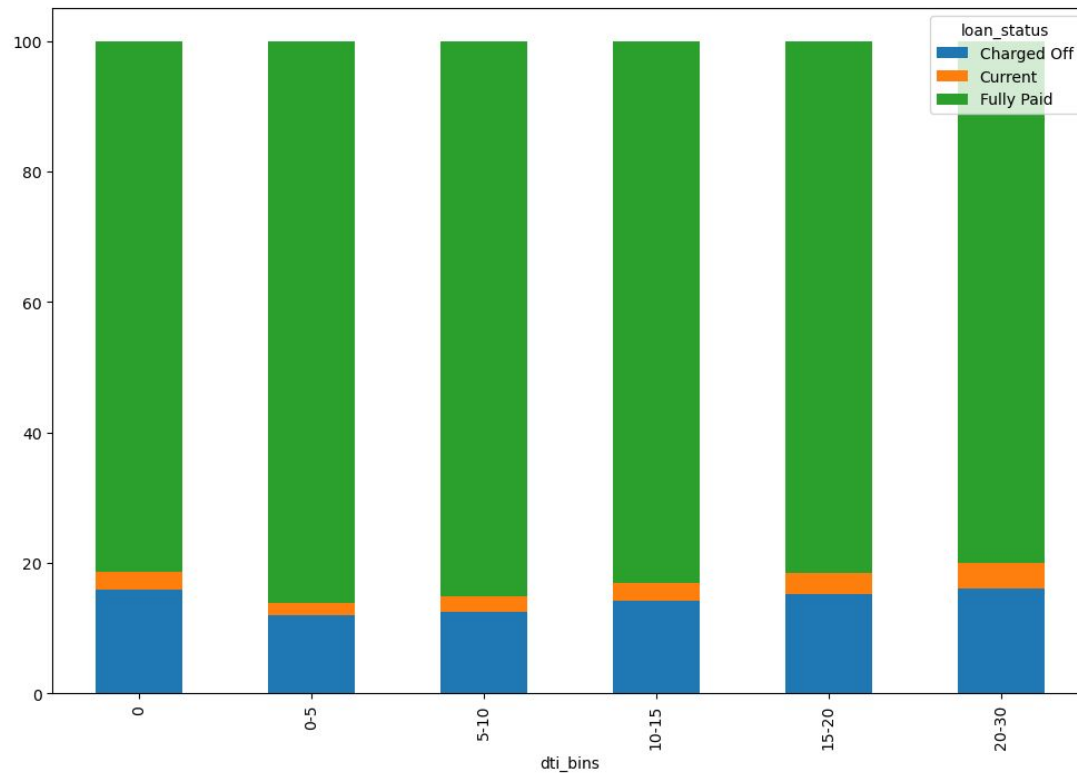
- a) The Graph Shows in percentage for the contribution in both charged off & Fully Paid.
- b) The percentage of Charged off is higher in purpose for loan taken small business, house, education, debt consolidation.





# Loan Status vs Dti

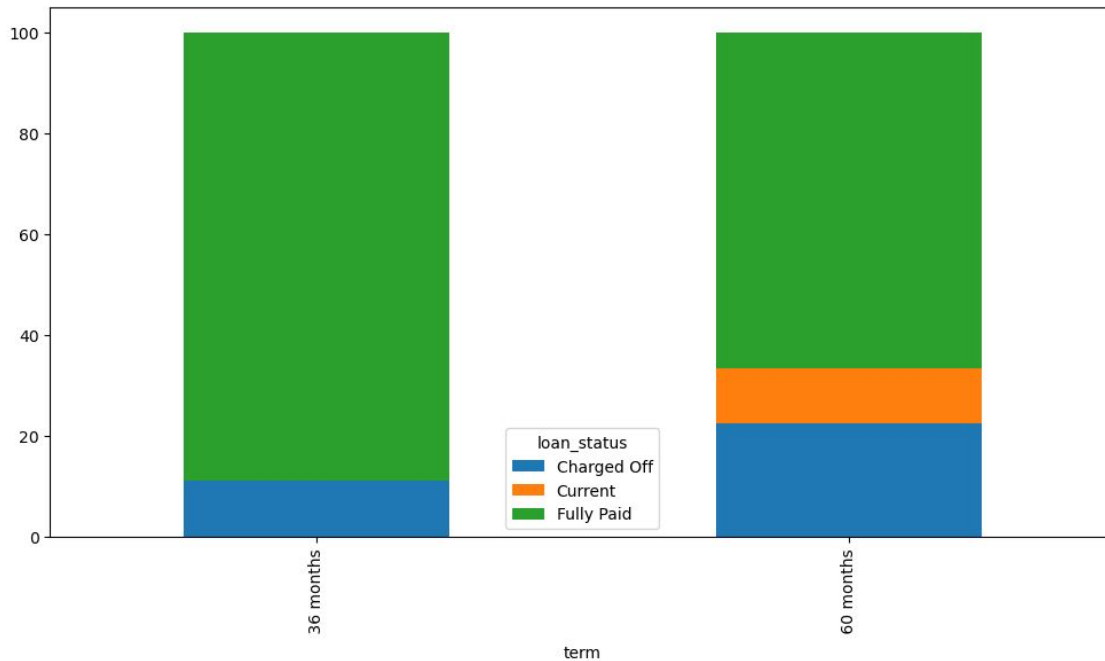
- a) The Graph Shows in percentage for the contribution in both charged off & Fully Paid.
- b) The percentage of Charged off is higher in 0 (Zero) and 20-30 bins



# Loan Status vs Term

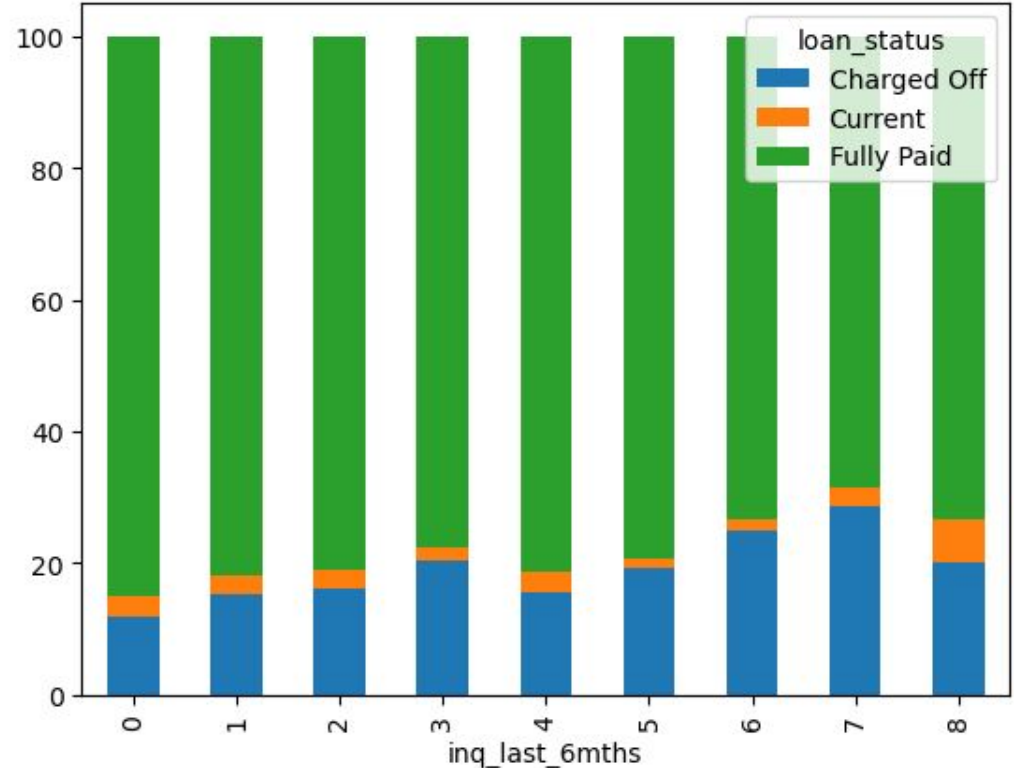
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- a) The Graph Shows in percentage for the contribution in both charged off & Fully Paid.
- b) The percentage of Charged off is higher in term period 60 months.



# Loan Status vs Inquiries last 6 Months

- a) The Graph Shows in percentage for the contribution in both charged off & Fully Paid.
- b) More number of inquiries is in uptrend and hence higher chances of default.



# Result

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- a) Loan taken for small business and lower income are leading to maximum defaulters.
- b) In grades C to G, the percentage of defaults are more, here grades play an important role in loan disbursal and can be reference from current data to make future decision.
- c) Loan charged off is higher in dti bins 0 (Zero) & 20-30.
- d) Loan disbursal for longer term should be verified sensibly.
- e) More number of inquiries is in uptrend and hence higher chances of default

**Thank You!**