

# Lending Club Case Study

Rishi Shah

Mohinesh Tayade

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# Executive Summary

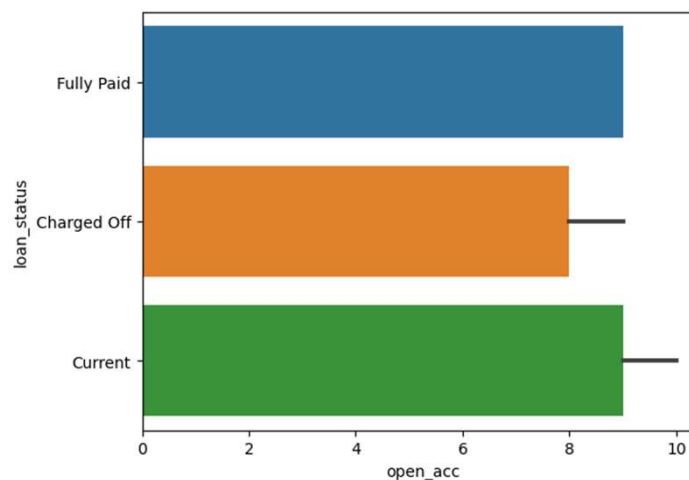
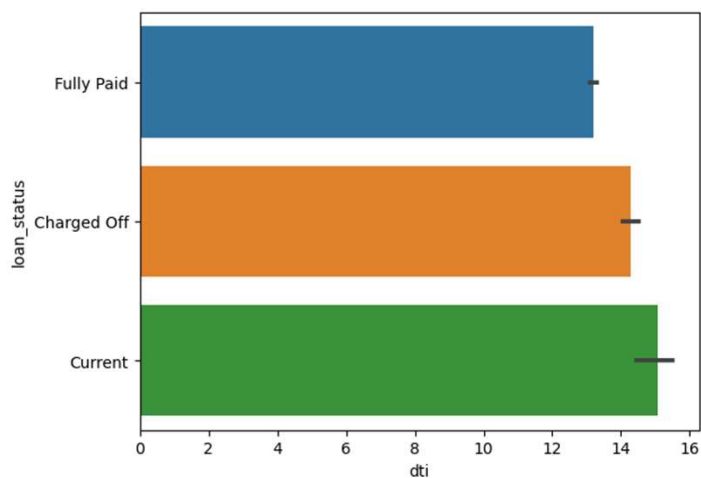
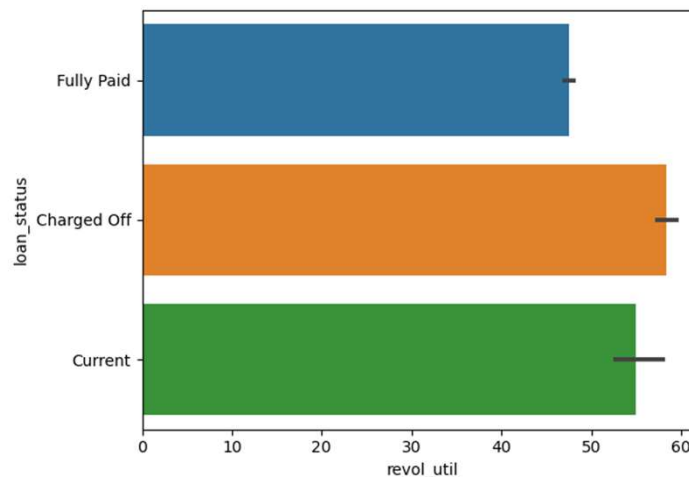
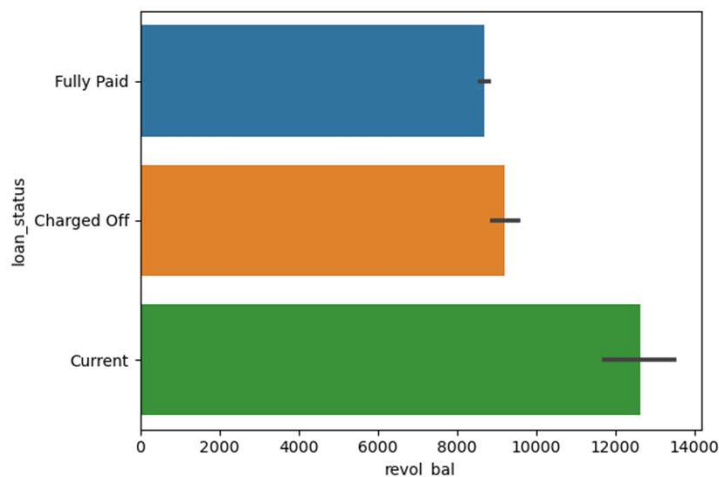
- Goal is to determine driving factors behind potential default by customers
  - 5 factors have been determined by Team
    - Customer Debt and Revolving Credit
    - Negative Public Records
    - Loan Parameters
    - Loan Grade
    - Purpose, Annual Income & Residence State
- Team has analysed 46 columns with relevant data
  - Data columns were analysed individually
  - Bivariate analysis of data columns with Loan Status
  - Certain metrics were derived but less insights derived
  - Several columns has no data or data with just one value

# Driver 1 – Customer Debt & Revolving Credit

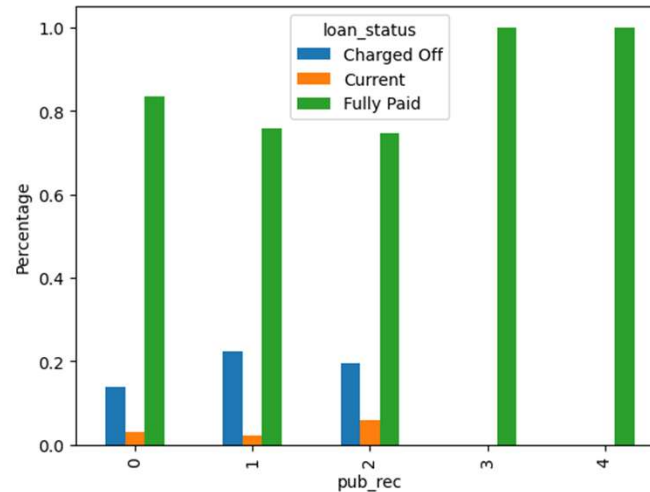
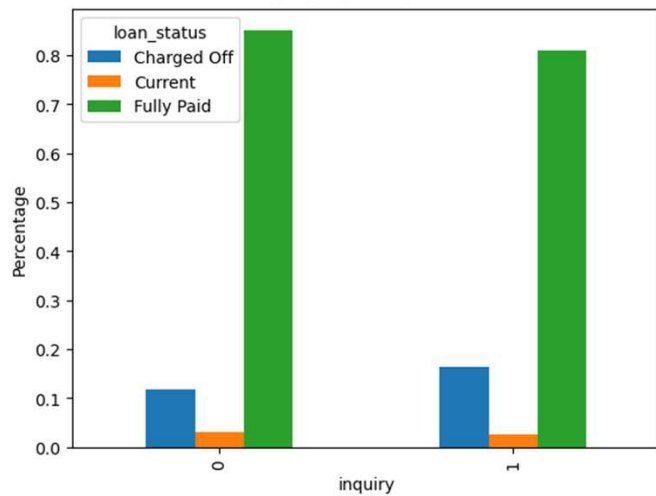
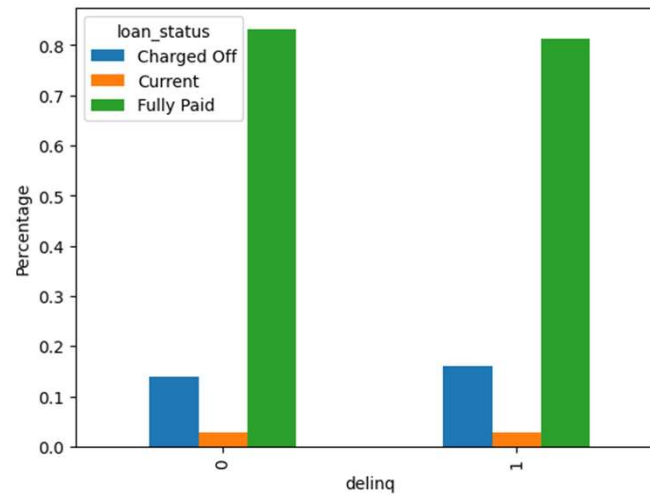
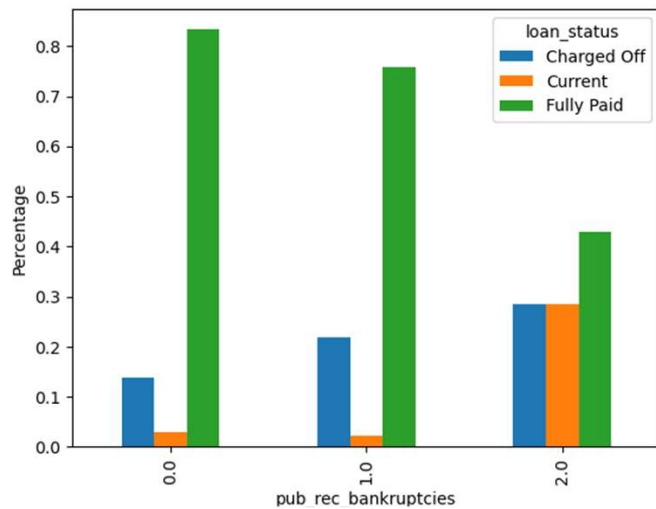
**Customer is likely to default if they have more debt or utilizing their credit line**

Determining Factors

- Revolving Balance
- Revolving Line Utilization
- DTI
- Open Credit Line Accounts



## Driver 2 – Negative Public Records

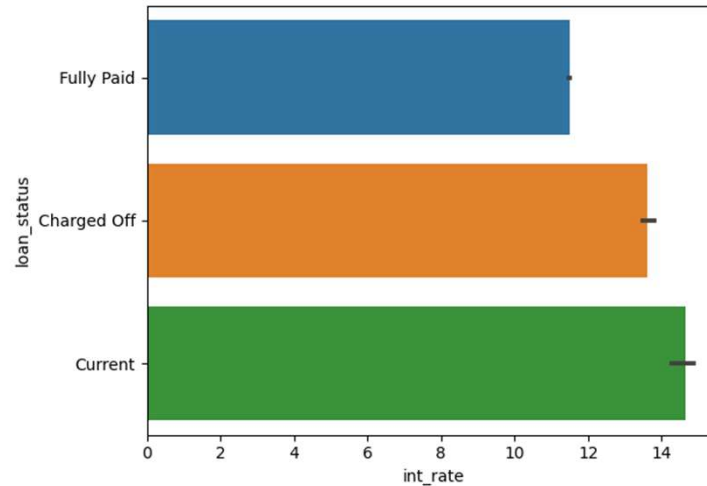
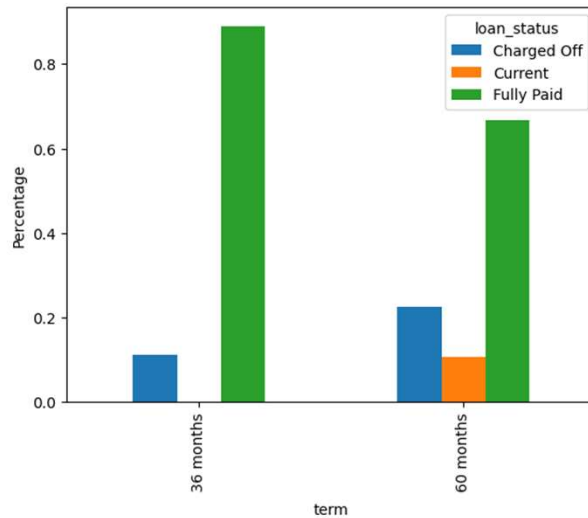


**Customer is more likely to default if they have negative public records**

Determining Factors

- Bankruptcies
- Delinquencies in Past 2 Years
- Credit Inquiries
- Derogatory Public Records

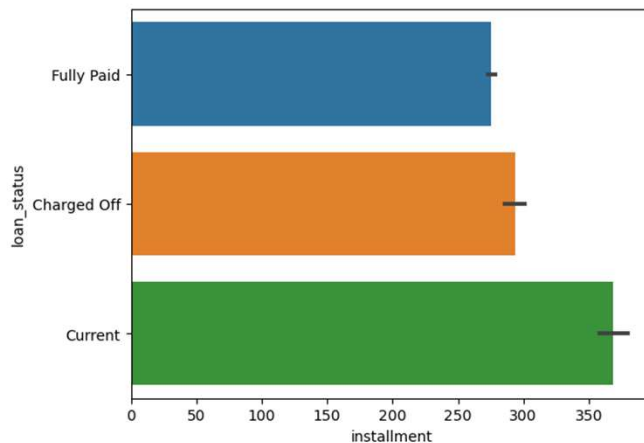
## Driver 3 – Loan Parameters



**Longer or higher loan parameters could lead to more defaults**

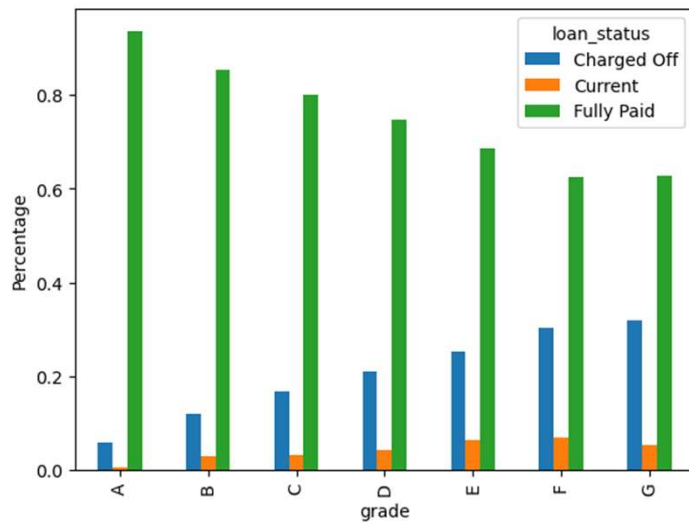
Determining Factors

- Longer Term
- Higher Interest Rate
- Bigger Instalments



Loan amounts were not of significance since quite consistent and below \$35k

# Driver 4 – Loan Grade

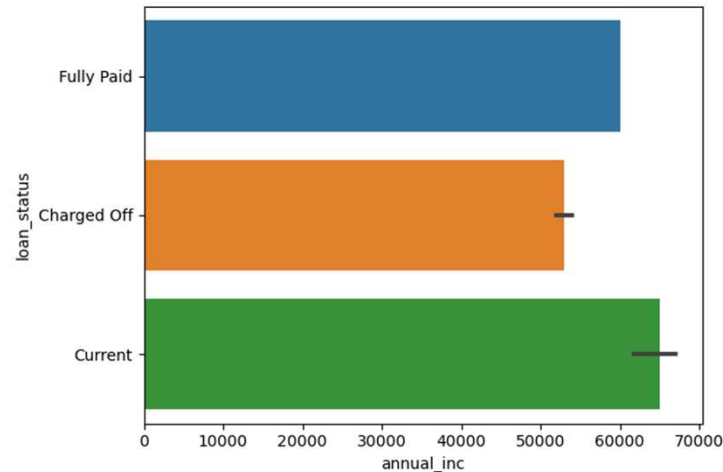
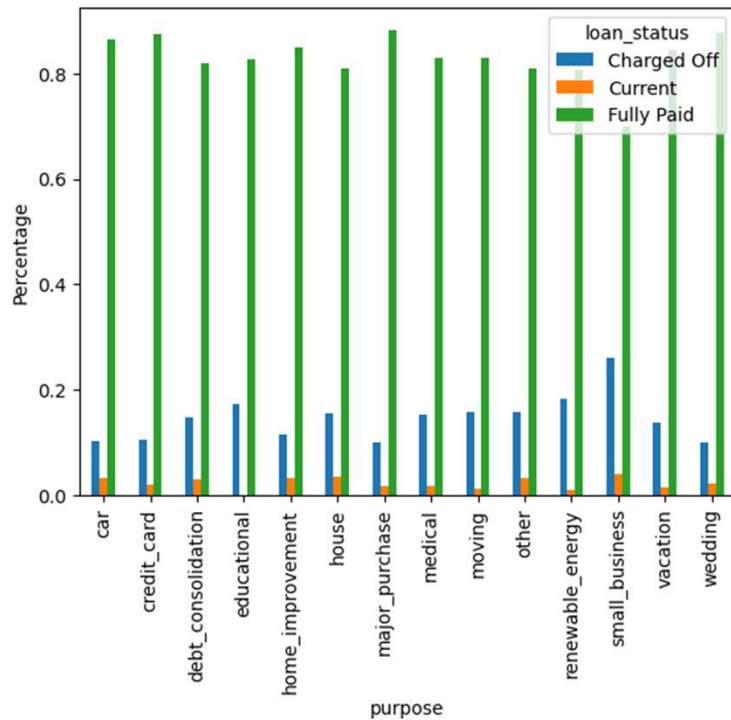


Loan Status	Charge_Off
G5	33.33%
G4	23.21%
G3	39.58%
G2	35.90%
G1	29.81%
F5	45.76%
F4	31.55%
F3	27.57%
F2	28.11%
F1	27.66%
E5	26.20%
E4	27.75%
E3	21.52%
E2	24.85%
E1	25.95%
D5	23.91%
D4	21.92%
D3	21.82%
D2	20.10%
D1	17.94%
C5	17.54%
C4	17.15%
C3	17.66%
C2	15.96%
C1	15.73%
B5	13.17%
B4	13.10%
B3	11.69%
B2	11.08%
B1	9.34%
A5	7.91%
A4	6.17%
A3	5.69%
A2	4.91%
A1	2.63%

**Loans that are rated lower by loaning agencies have high default rate**

- Results are consistent for sub-grades

# Driver 5 – Purpose, Annual Income & Residence State



**Purpose and Annual Income are important factors to determine defaulters**

## Determining Factors

- Purpose – Small business, energy and education loans are riskier
- Annual Income – Less annual income indicates higher default

**State – Customer from certain states are more likely to default**

- Nevada
- Arkansas
- South Dakota
- Florida
- Montana