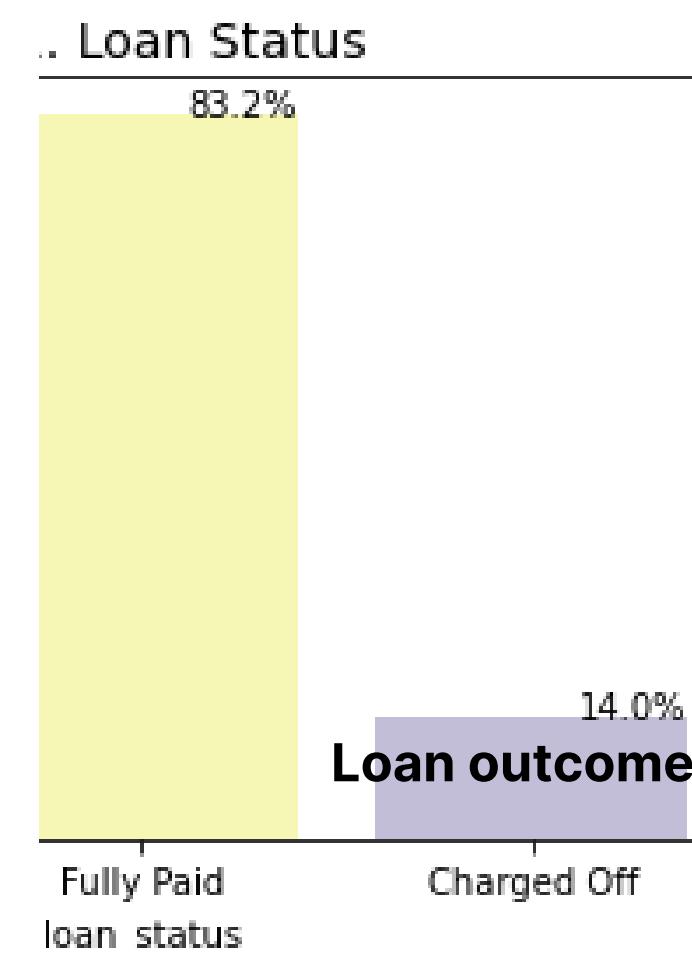
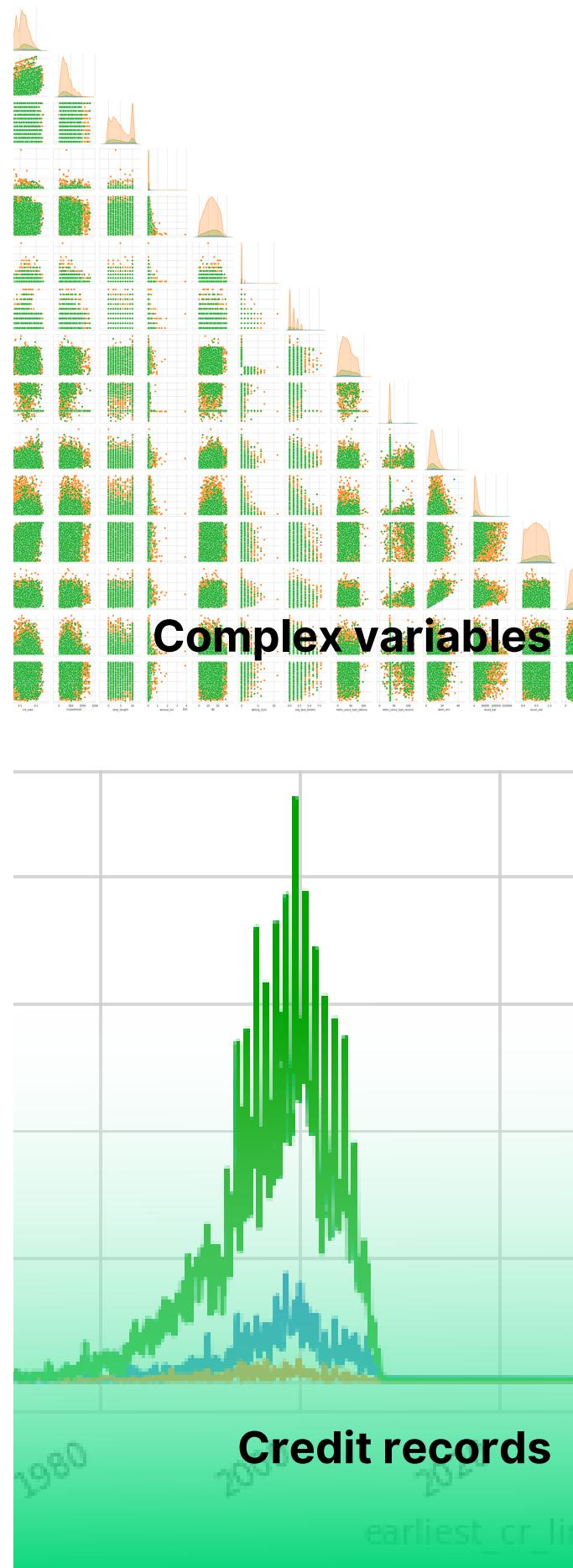


Lending Club Case Study

Dr Kaushik Sarkar



Towards profitable lending ...

Business Problem

- ⚠ Lending loans to 'risky' applicants is the largest source of financial loss (called credit loss).
- ⚠ If the applicant is not likely to repay the loan, approving it may lead to a loss for the company
- ✓ This case study provides the topline results from an exploratory assessment to find the drivers of risk and potential relations to formulate further hypothesis and build models.





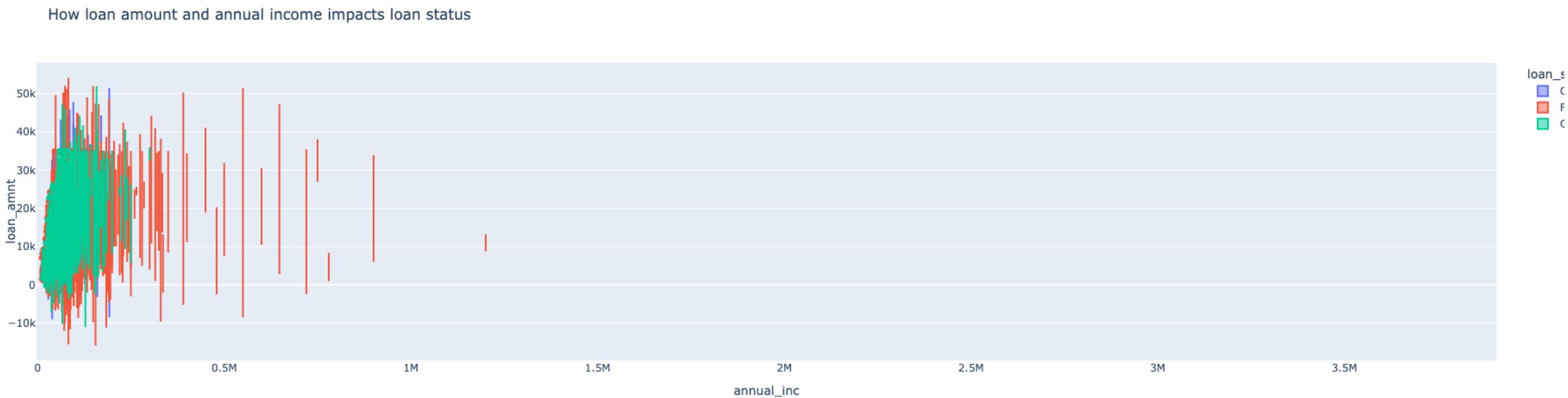
Complexity reflects need of a prediction model

Key Findings

1. Lower annual income irrespective of loan amount, but with higher interest rates have greater frequency of charge off.
2. More inquiries in last 6 months with less revolving balance is more likely to get into charge off.
3. The extreme positive of sentiment score of description along with large description may result in more likely charge off.
4. Charge off is more with higher number of total accounts when open accounts are more.
5. Income less than 80K along with higher employment length and loan tenure of 60 months are more likely to charge off.

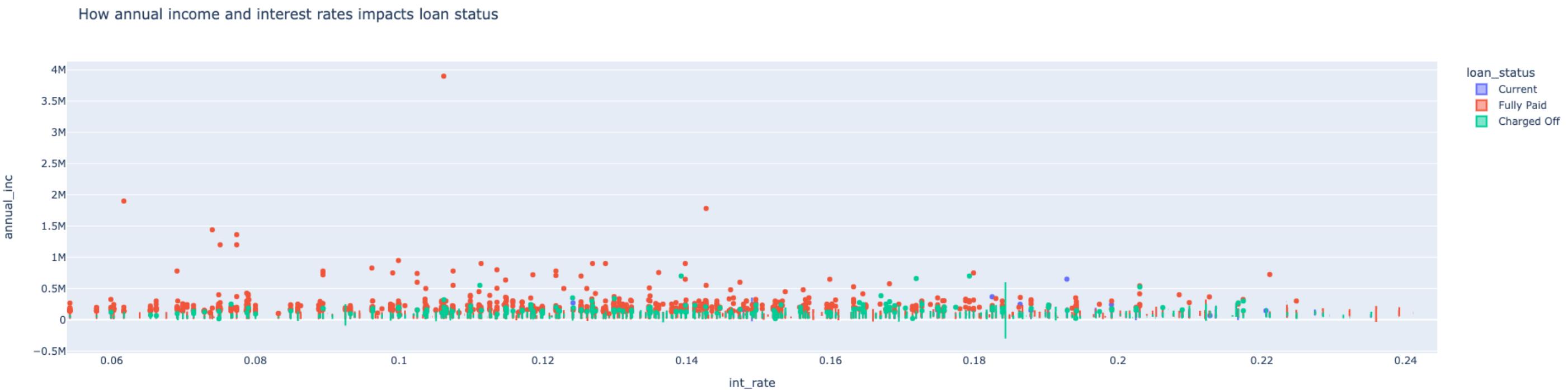
Visualization of complex risk

Loan amount & Annual income



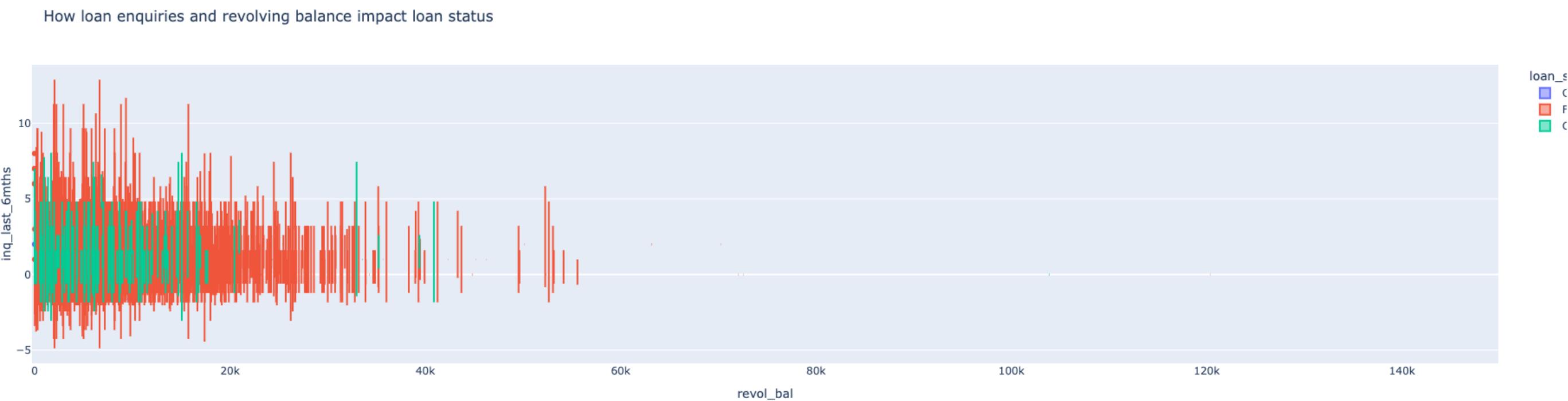
Visualization of complex risk

Annual income & interest rate



Visualization of complex risk

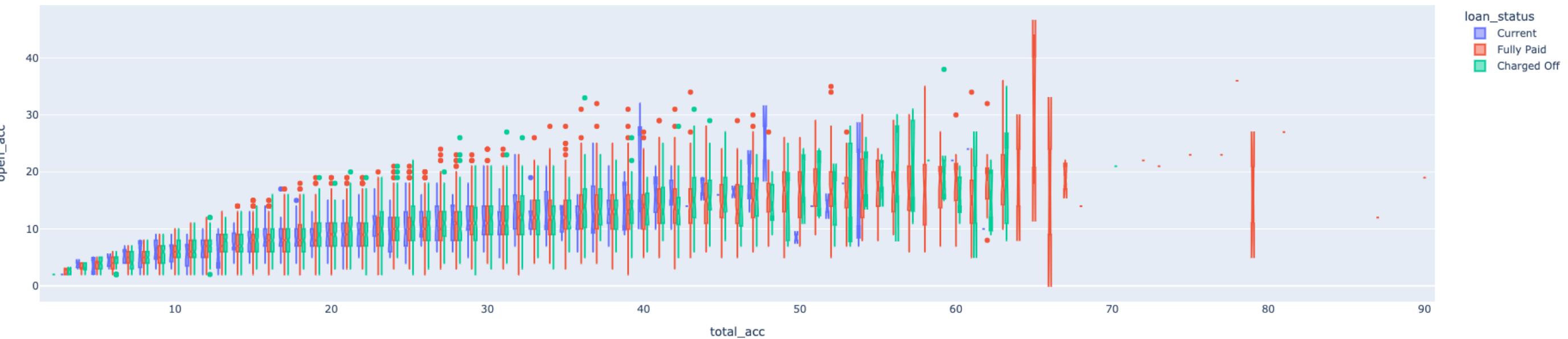
Loan enquiries and revolving balance



Visualization of complex risk

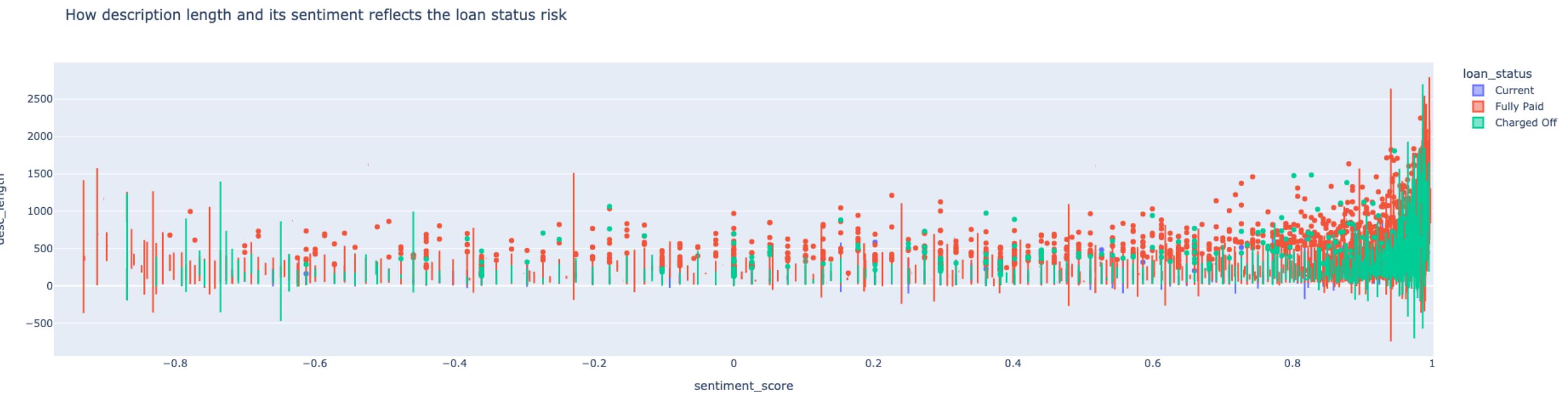
Total and open accounts

How total vs open accounts impact loan status



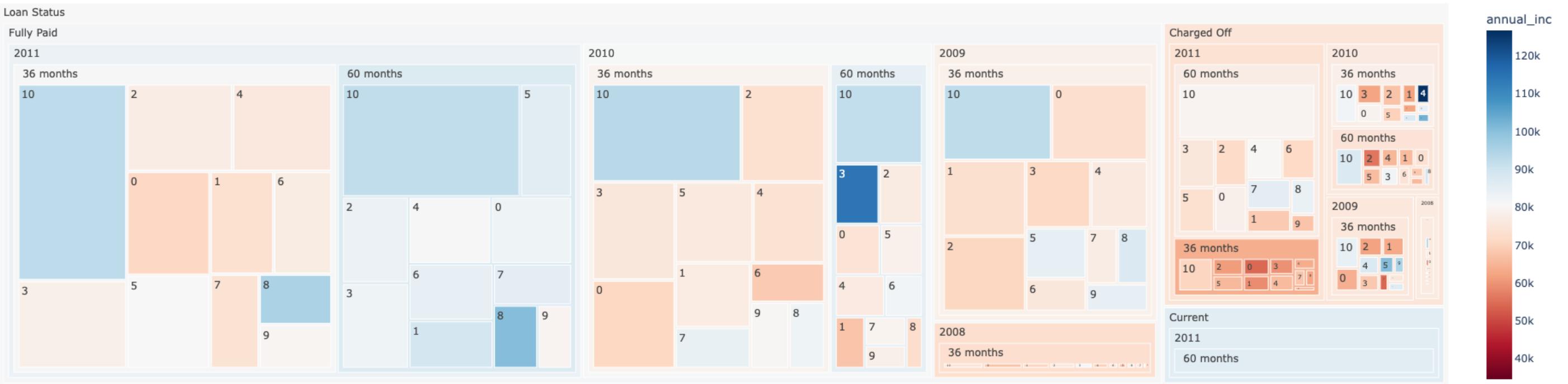
Visualization of complex risk

Description and sentiment



Visualization of complex risk

Loan duration, employee factors





Analysis details

Background assessments

Data

Lending club case study loan dataset contained information on over 39 thousand records and 111 variables

Work

Data cleaning & exploratory data analysis
Univariate
Segmented univariate
Bivariate & derived

Detailed analysis report

Thanks to IIITB and UpGrad



[https://github.com/drkaushiksarkar/
LendingClubCaseStudy](https://github.com/drkaushiksarkar/LendingClubCaseStudy)

