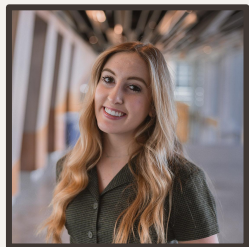


Improving Financial Wellness with Banking Data

May 10, 2022



Maddi Klancher
mrk256



Shane Racey
str45



Oren Steingarten
oas26



Joshua Clark
jlc489



Thanks for Listening!

Check out our full report below:

[Team 3 ORIE 3120 Final Report](#)



Capital One has unique access to financial data



Payment
History



User Debt
and Loans



Spending
Categories



User
Income

Banks are already mature in the use of data for business purposes

Credit
Scores

APR for
Loans

Fraud
Detection

Users don't experience the benefits of their data or the collected knowledge of banks

< 1% of this data is leveraged by most banks for their business needs¹

Third party apps have stepped in to fill this demand



Capital One has the opportunity to leverage their data to benefit their users and business



Generate
Insights



Increase Customer
Financial Wellness

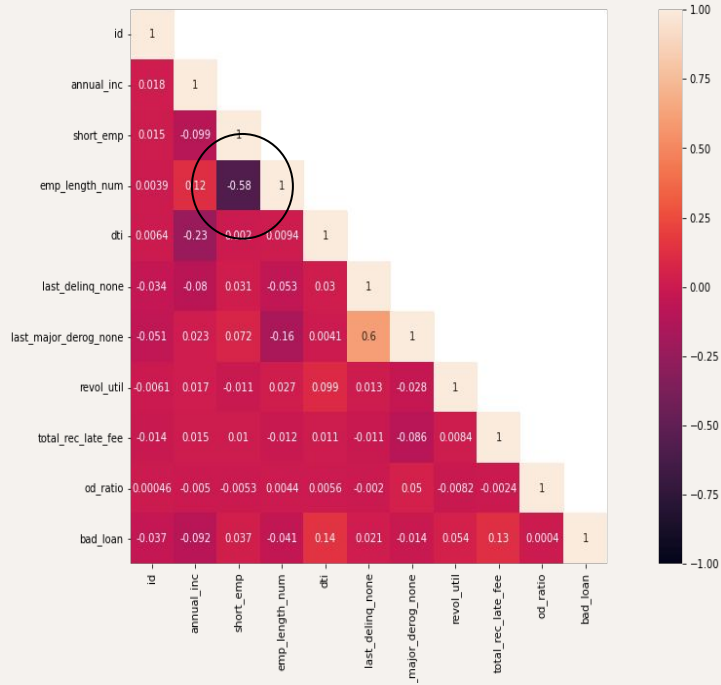


Improve
Business



**Loan defaults hurt
financial wellness**

Debt-to-income ratio is the greatest contributing factor to default.



Debt-to-income ratio

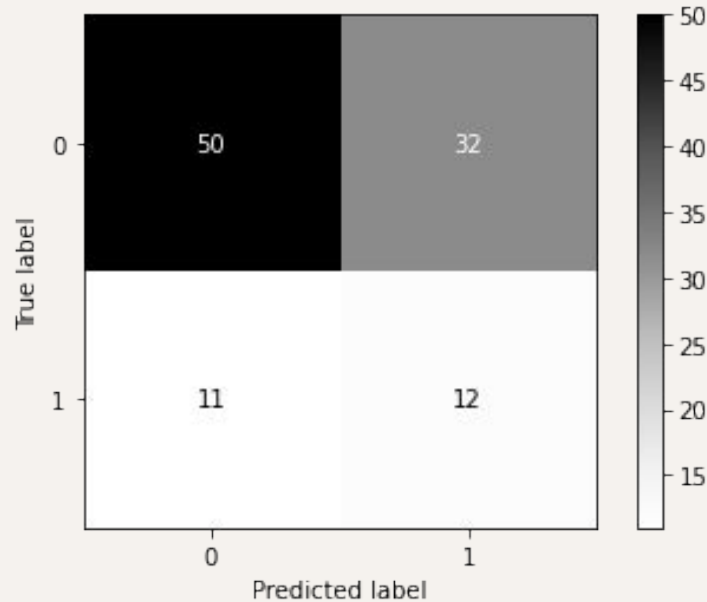
Late fees received to date

Borrower credit

Short-term employment

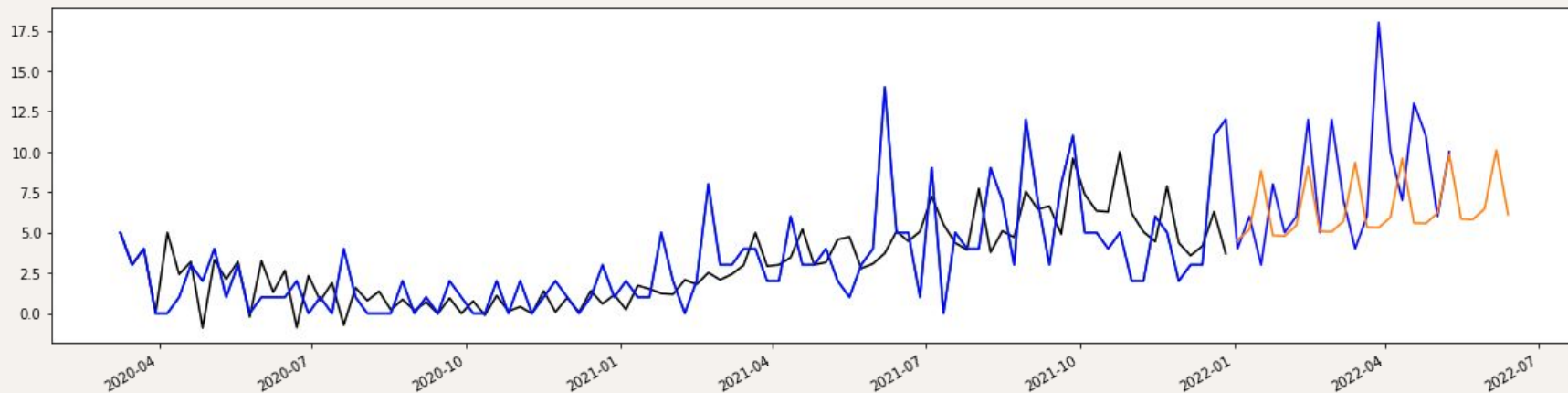
Circumstance of delinquency

Capital One can leverage logistic regression to predict user defaults before they happen



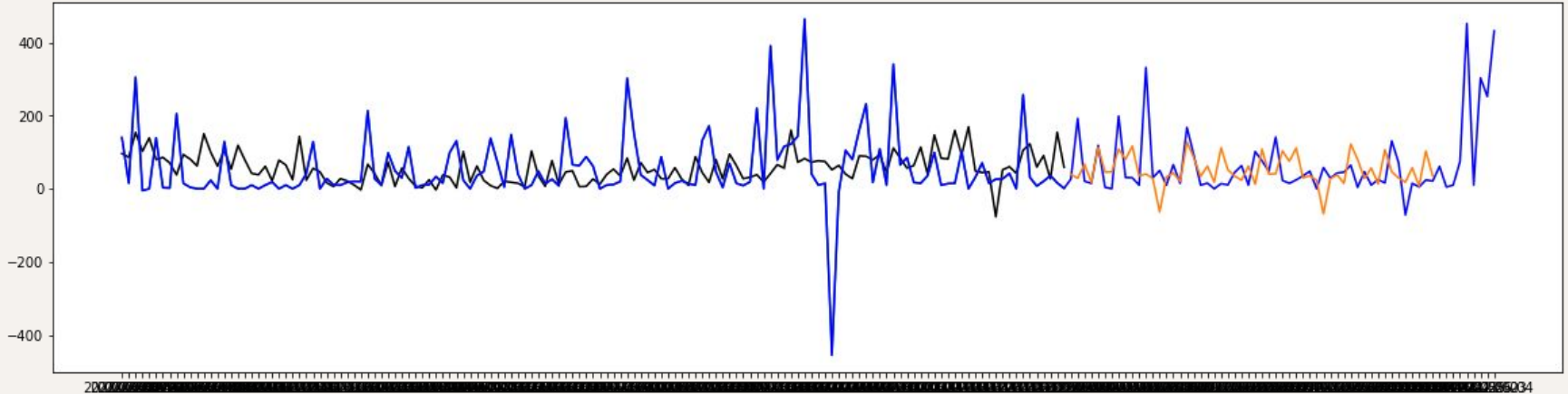
Confusion matrix for a logistic model predicting a loan default

Forecasting user spending enables interventions to prevent overdraft



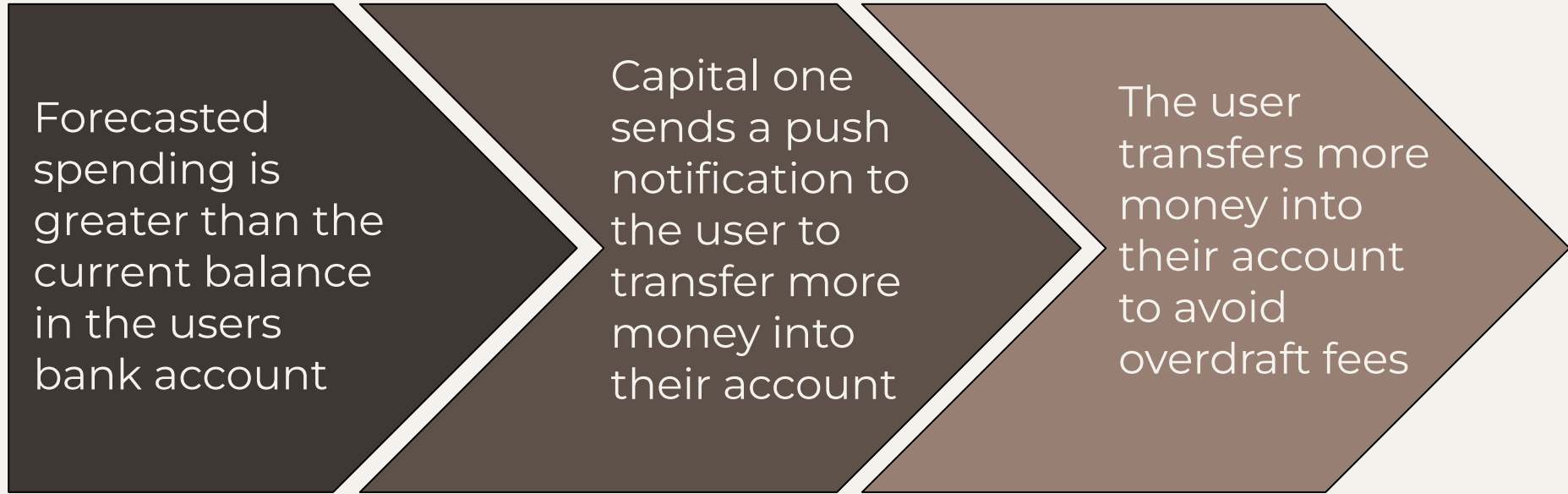
Forecasting the count of transactions per week

Forecasting user spending enables interventions to prevent overdraft and incentivize spending

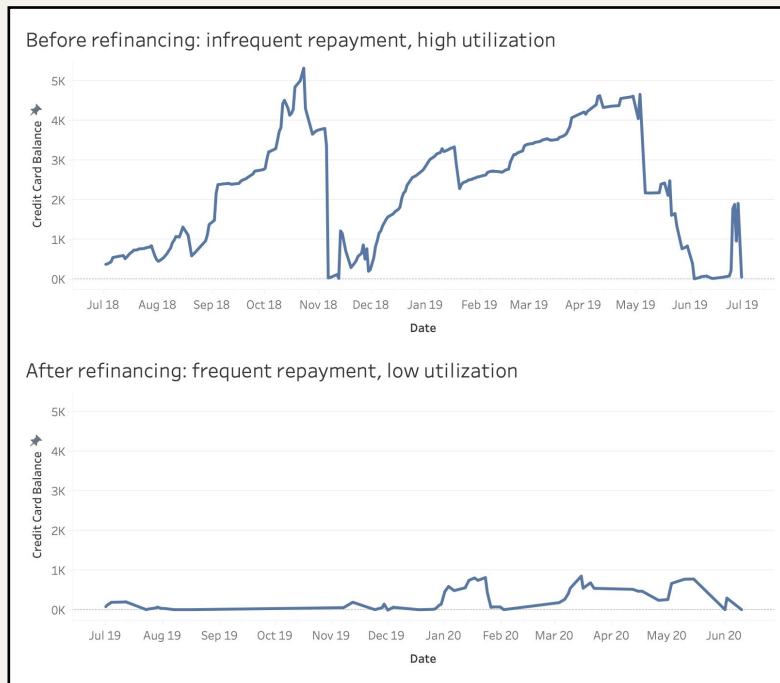


Forecasting the transaction amount (USD) per day

When forecasted spending is greater than current balance, an alert can protect users from overdraft

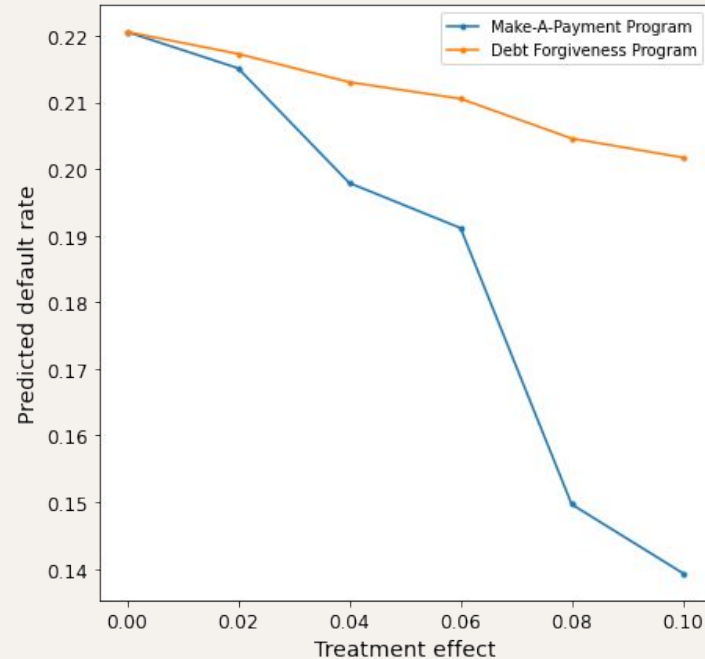


Loan refinancing is an effective intervention method to improve user wellbeing

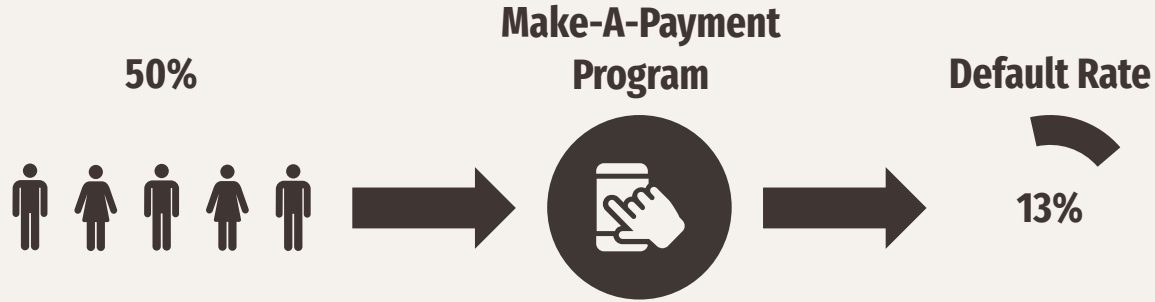


Visualizing user credit utilization before and after refinancing

Intervention programs that increase payment frequency were effective at reducing default rate in simulation



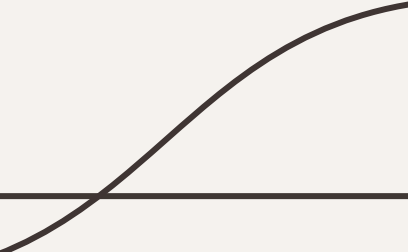
Capital One can put these insights into action with A/B testing





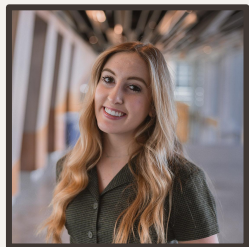
We thank you for your time!

Please reach out to any of our team members with any questions or comments!



Improving Financial Wellness with Banking Data

May 10, 2022



Maddi Klancher
mrk256



Shane Racey
str45



Oren Steingarten
oas26



Joshua Clark
jlc489