

Loan Repayment Predictor

Reynold D'Silva



Dataset



- Source: Kaggle
- 2018-2020
- 28 Features and 246,000

Data Points



Highlights:

Target
Loan Status

Goal
Predict Customer
Repayment

Loan
Payment
Prediction

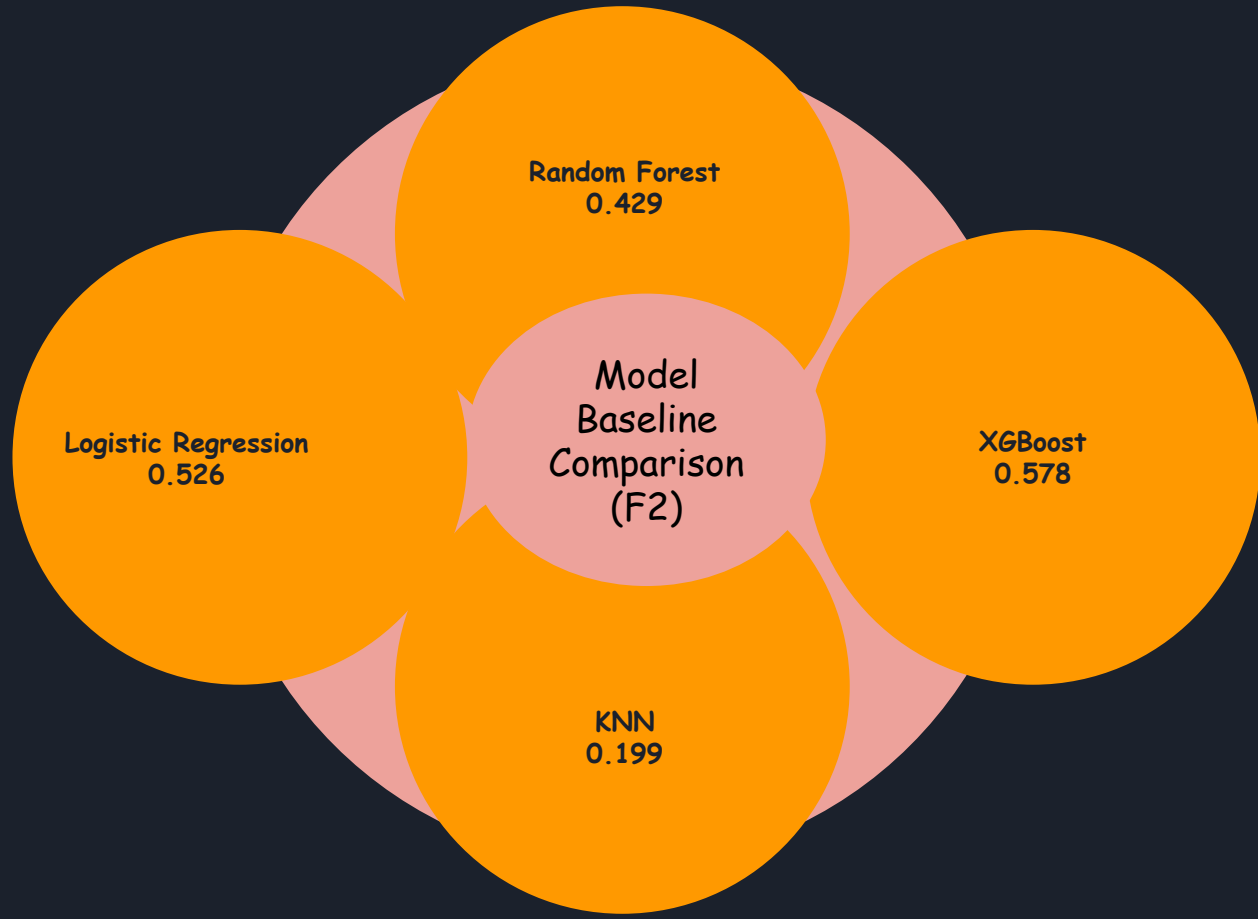
Client
Higher Profit

Focus
Highly probable
to Pay Back



Data Features

Borrower	Employment Length, Address State, Home Ownership
Loan	Loan Amount, Loan Purpose, Interest Rate, Installments, Loan Term
Financials	Annual Income, Debt to Income Ratio
Ratings and Scores	FICO score, Lending Club loan grade





XGBoost



XGB 1 - Confusion Matrix

F2 Score: 0.578

Actual	Fully Paid	22,264	16,830
	Charged Off	2,613	7,494
		Charged Off	Fully Paid
		Predict	



XGB 4 - Confusion Matrix

F2 score: 0.585

Actual	Fully Paid	21,113	17,981
	Charged Off	2,358	7,749
		Charged Off	Fully Paid
		Predict	

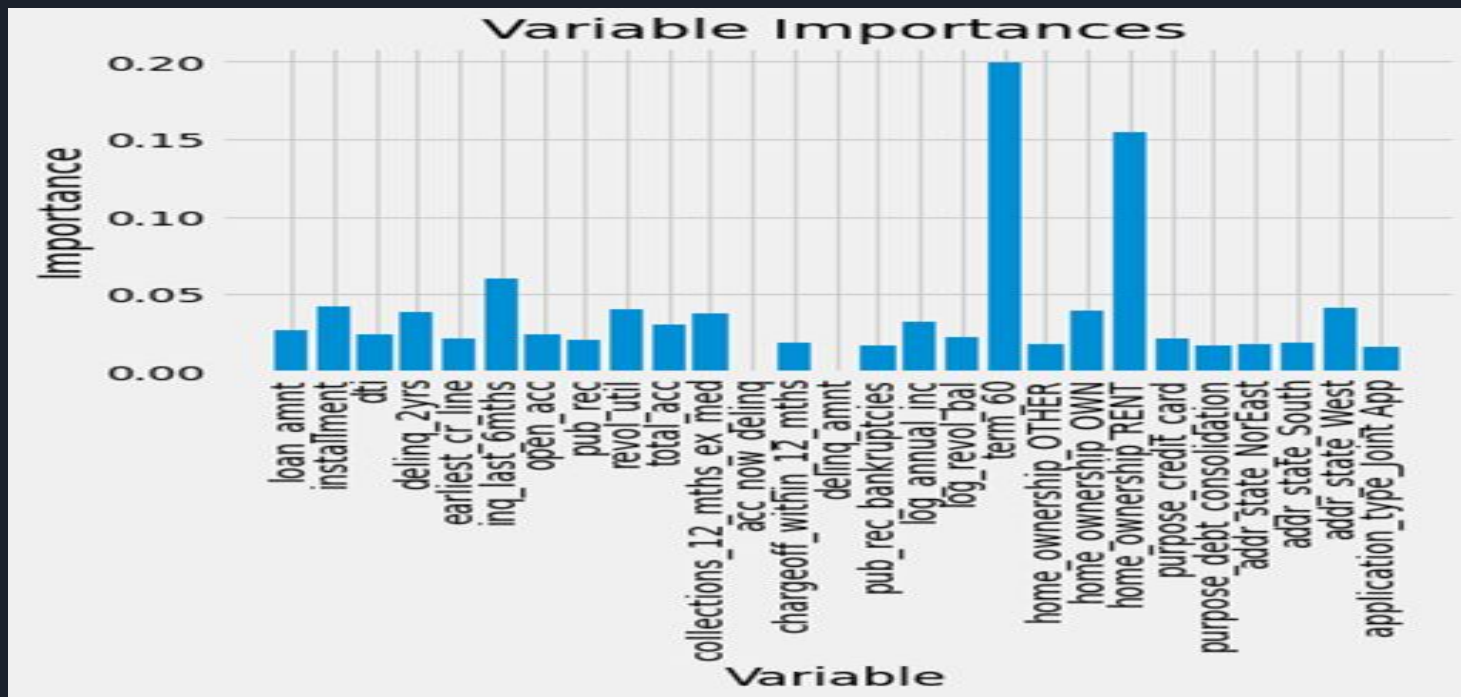


XGB 5 - Confusion Matrix

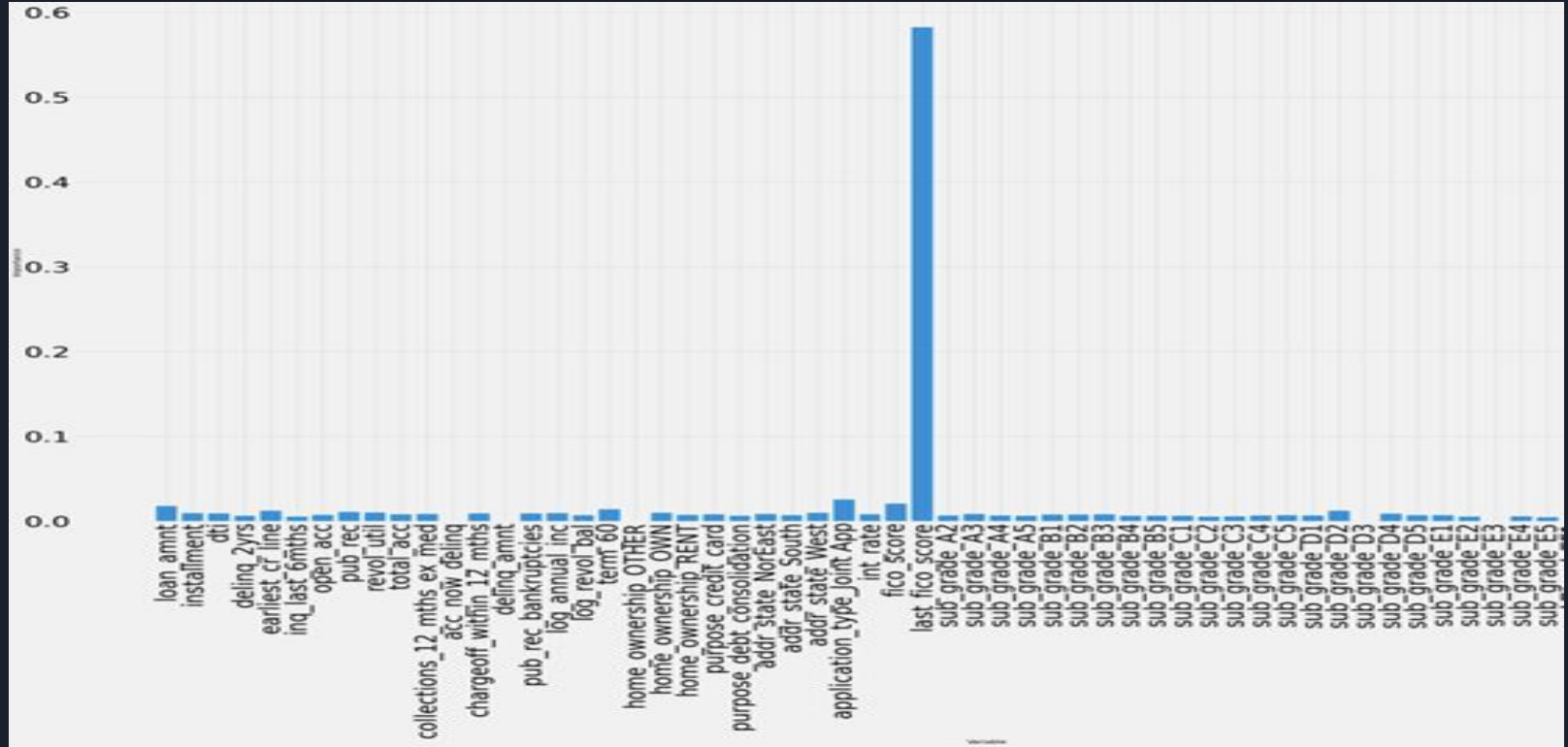
F2 score: 0.589

Actual	Fully Paid	21,037	18,057
	Charged Off	2,289	7,818
		Charged Off	Fully Paid
		Predict	

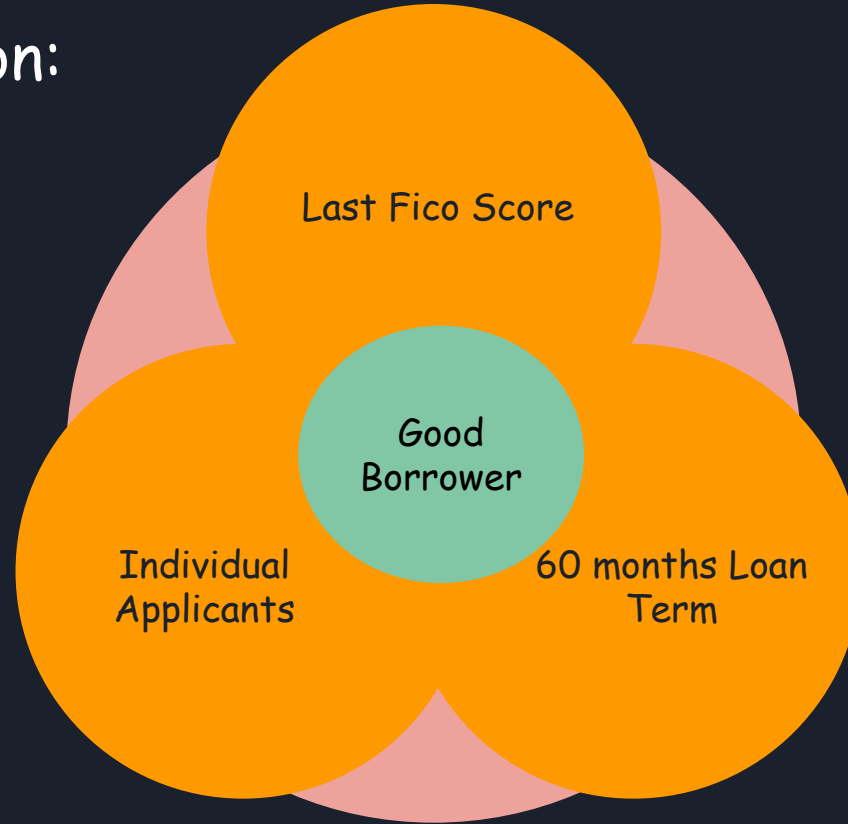
Feature Importance: Loan Term and Applicant Type



Feature Importance: Last Fico Score



Conclusion:





Future Work

Tune on XGBoost More

Include more Data
Points

Thank you!

