



Presented by Rohit Lokwani

MERCHANT TRANSACTION ACTIVITY ANALYSIS

"Cost of making a new customer as profitable as a current customer could be up to 16 times higher than the cost of retaining efforts. Decreasing the churn rate by only 5% can increase the profitability by 25–125%"

~Behavioral attributes and financial churn prediction ([Springer](#))



INTRODUCTION

- Merchant retention is crucial in a competitive payments industry as acquiring new merchants is often tougher than keeping the current ones.
- We try to mitigate this problem with help of data of over 1.5 million transactions from 14351 merchants



BUSINESS PROBLEM

- Identify different kinds of businesses in the sample
- Identify and predict merchants who have churned previously or are likely to churn in future



OUR MAIN GOALS

Decreasing the churn rate by only 5% can increase the profitability by 25–125%.

68% of the churning customers expressed that they would not do business again with the companies that they left.
(Springer)

Goals 1

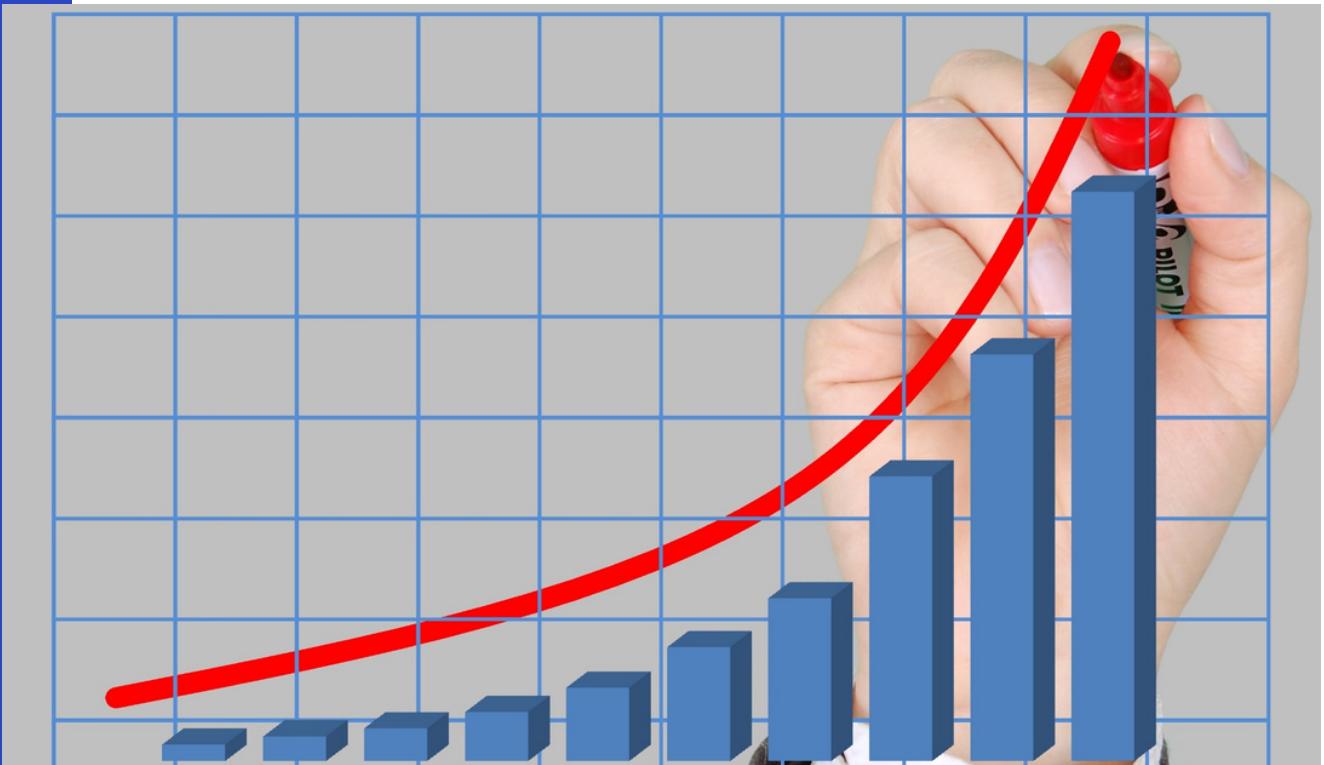
Split merchants into different groups on basis of loyalty, regularity and temporal diversity and understand the variation

Goals 2

Identify merchants at high risk of churning in future

Goals 3

Targeted strategic marketing to increase merchant retention, engagement and addition of business value





DATA AT A GLANCE

1513719
transactions

14351
merchants

Period
2033-2044

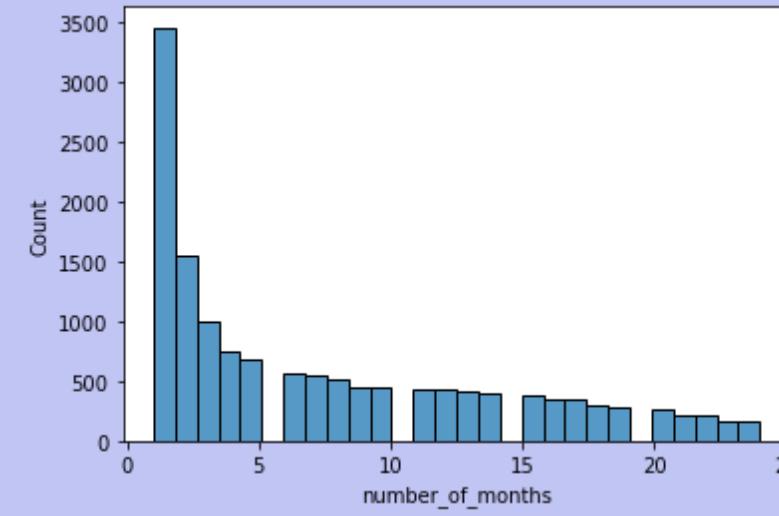


DATA AT A GLANCE

Using transaction records, we investigate the temporal patterns and dynamic behavioral choices underlying the merchants' financial decisions, and their relations to churning activities.

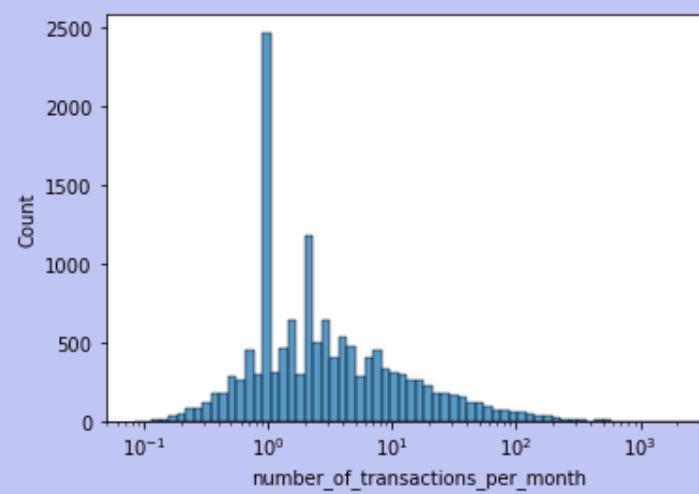
Loyalty

Number of months the merchant stayed with us



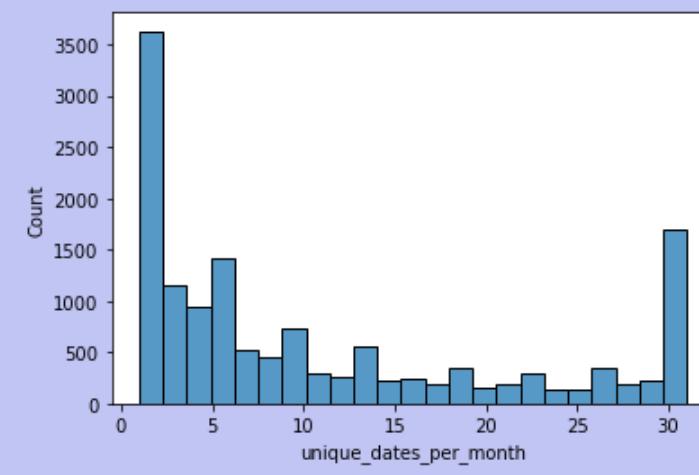
Regularity

Number of Transactions per month



Diversity

Transaction Time and date



*We also use average transaction amount per month as a measure of accounting information





STRATEGY

A merchant is said to have churned if there have been no transactions in a 90-day period.

Broad-Level categories:

- Permanently churned
- Churn recovered
- Never churned

01

Cluster merchants into different groups using AI

02

Combine permanently and temporarily churned merchants as single group and build a prediction model to identify merchants at risk of churning at any point

03

Analyze the churn rates in different groups, churn contributing factors and suggest measures for retention



ANALYSIS I

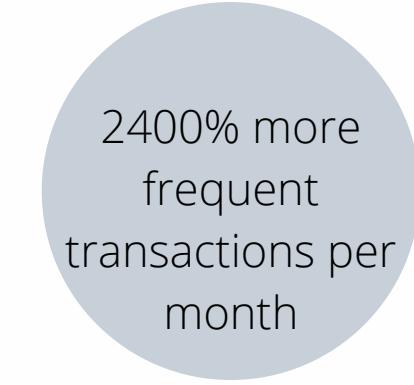
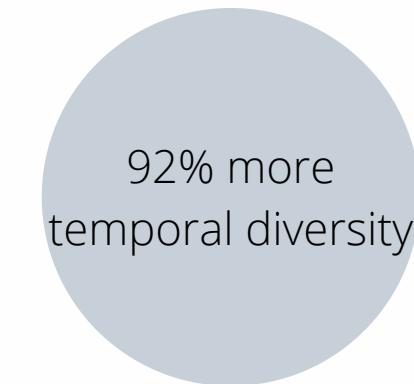
Low individual regularity
and financial contribution
(Group 1 - 95.8%)



High loyalty
(Group 2 - 3.76%)



High regularity, diversity
and financial contribution
(Group 3 - 0.37%)

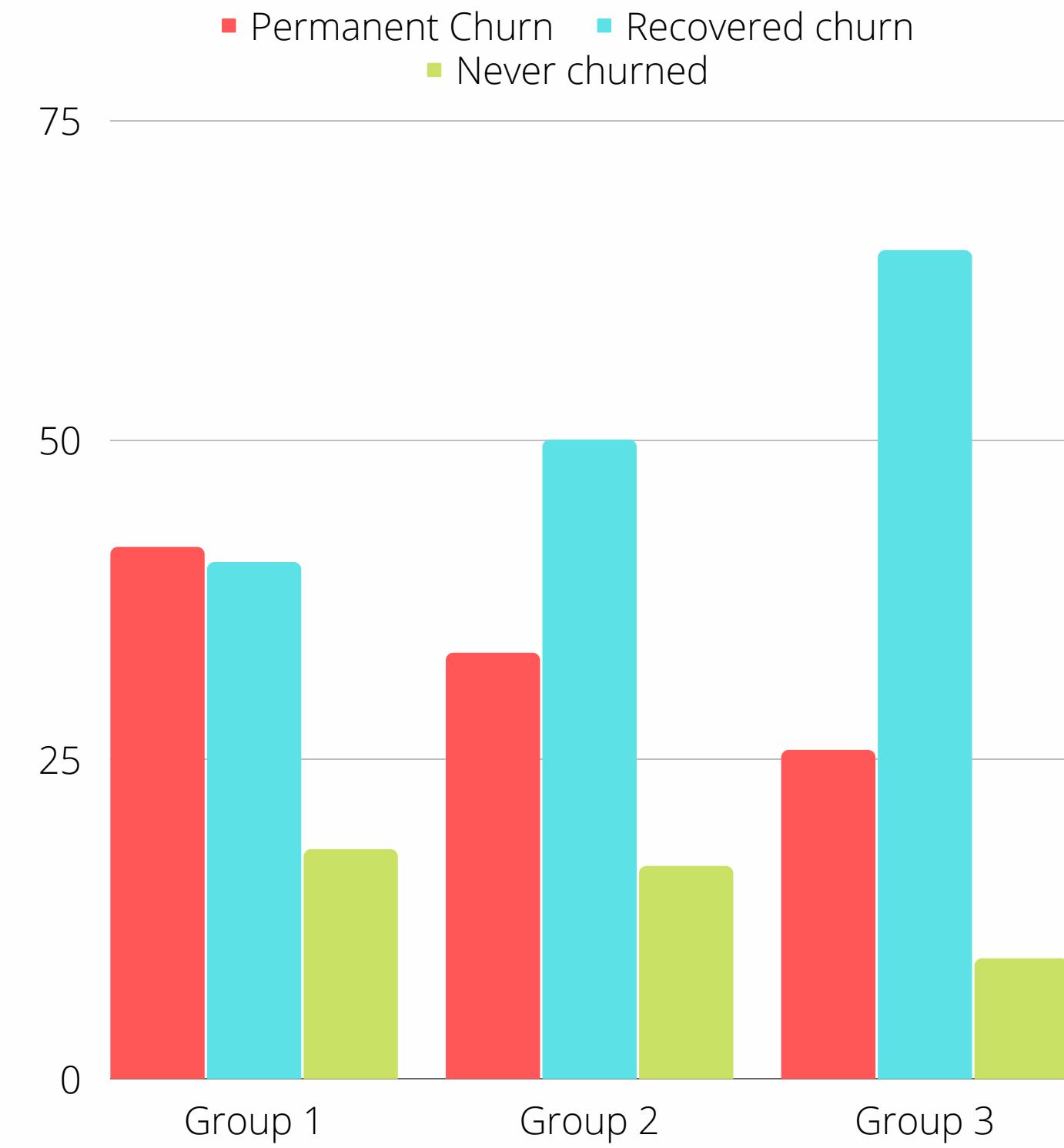


ANALYSIS I

Group 1 - Low regularity and financial contribution

Group 2 - High loyalty

Group 3 - High regularity, diversity and financial contribution

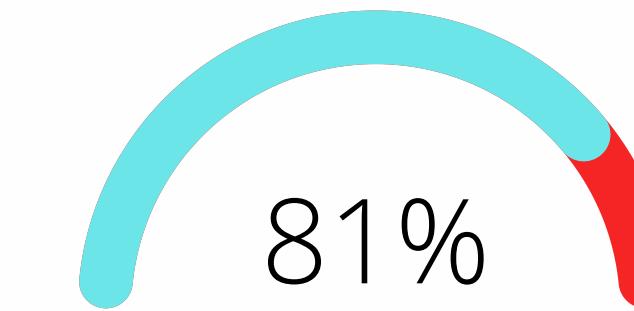




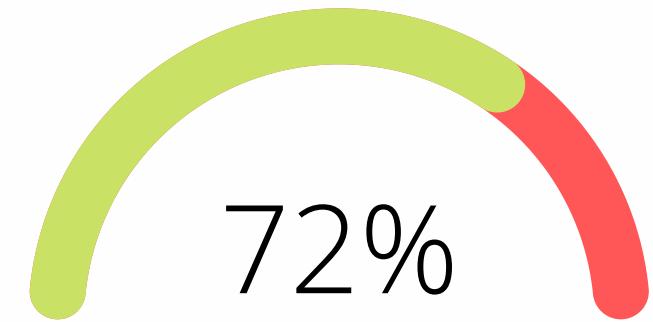
ANALYSIS II

Proactively identify merchants at risk of churning would help take required measures to make them continue with us

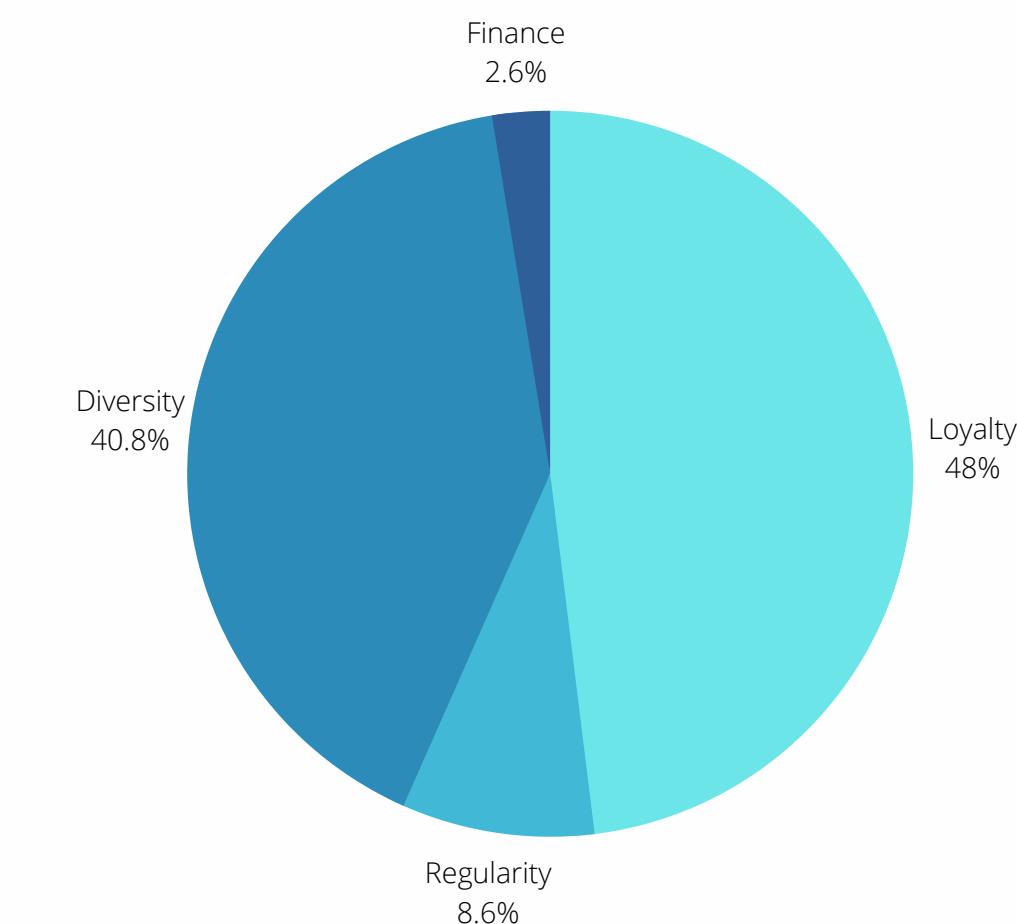
Churn Rate/Prevalence - 82.9%



AI accurate churn prediction



AI accurate not churn prediction



Major contributing factors for AI churn prediction





BUSINESS IMPACT

01. Increase Engagement for Group 1

Targeted marketing for promotions, coupons and limited time offers

02. Market premium services to groups 2 and 3

Loyalty rewards in terms of offering premium services at low prices. Regularity and high amount transactions can be rewarded with cash back rewards

03. Merchant Retention

Obtaining regular qualitative and quantitative feedback from the merchants at high risk of churning to retain them.

*The AI model accuracy is 79%. Hence, a cost-benefit analysis is required before offering cash rewards for retention.



EXTENDING THE ANALYSIS

Limited transaction data in terms of features

New potential contributing factors:

- Demographics of the merchant
- Account information (Remaining balance, outbound transactions, Type of business, payment methods)
- Usage tracking (CTR, Time on website)
- Number of stripe products in use and number of offerings provided by the merchant



תודה
Dankie Gracias
Спасибо شکرًا
Köszönjük Terima kasih
Grazie Dziękujemy Děkujeme
Ďakujeme Vielen Dank Paldies
Kiitos Täname teid 谢谢
Thank You Tak
感謝您 Obrigado Teşekkür Ederiz
Σας ευχαριστούμε 감사합니다
Bedankt Děkujeme vám
ありがとうございます Tack