# Logic of Synthetic data

User Config

Credit card category, merchant category

Customer

Income, Location, transaction amount stats, nb of trades per day, ip table, credit card owned, online/offline ratio

Merchant

Merchant size, fake or real, pos id used, issue card or not, established date, MCCs

Transaction

Start date, blacklist IP,

Transaction generating logic

Credit Card

Credit card used generating logic

POS

POS assigned logic

Customer behavior

Fraud logic

Testing period: randomly pick n customers, multiple trades at small amount within small window, with a random card the customer owned

test\_fraud\_id\_n\_card\_type\_tbl: No. of date testing stolen data of specific compromised customer on his/her specific card. Each row means a new compromisation

test\_frauds\_records: all fraud transactions to test stolen data

test frauds no weekend adjustment (little money to test)

monetization logic: after a certain period, use the same card to trade certain days at big amount

Holiday adjustment: during holiday, more data stolen🡪more testing; easier to hide🡪more monetization

Future Roadmap

Add more fraud logic

Code optimization

unittesting