Kym

Micro loans based Payments wallet

Using Machine learning on data captured through social profiles
And SMS/Email

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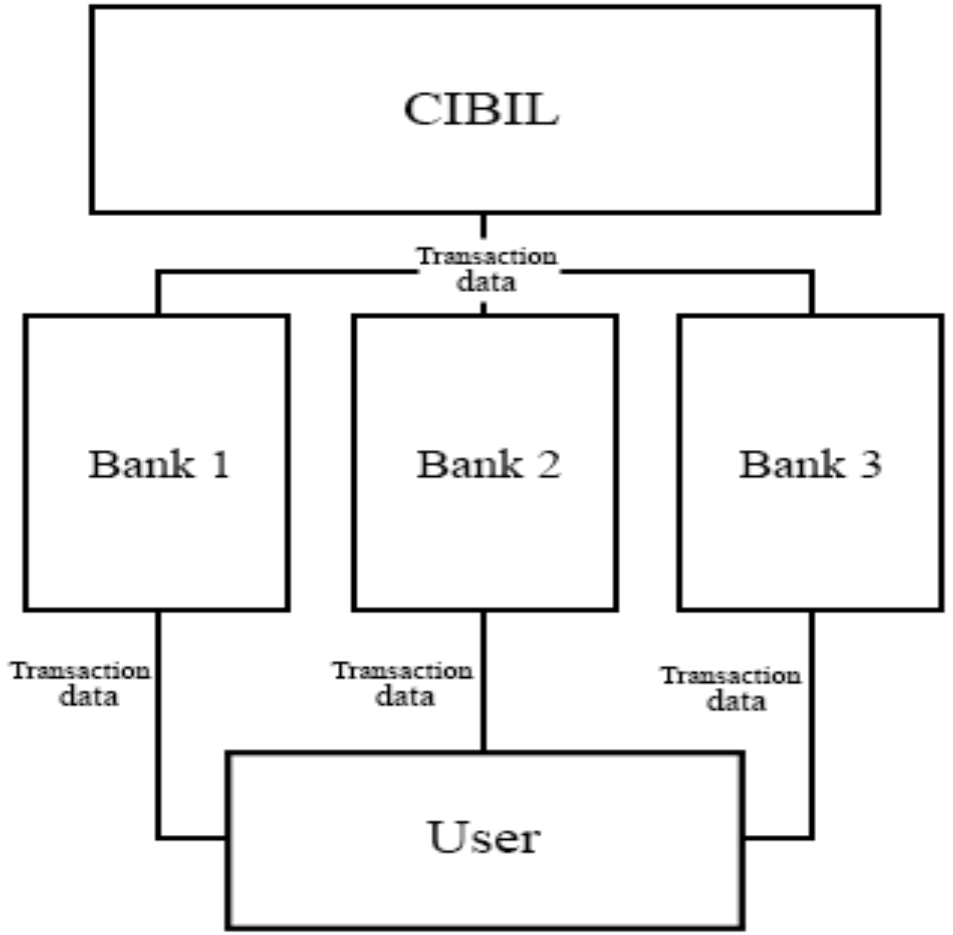
CIBIL TRANSUNION

CIBIL :

- A body that calculates credit score
- Score is based on past performance
- Based on at least 6 months of historical financial data of an individual
- Frequency of data collection - 1 month



PROBLEMS ADDRESSED

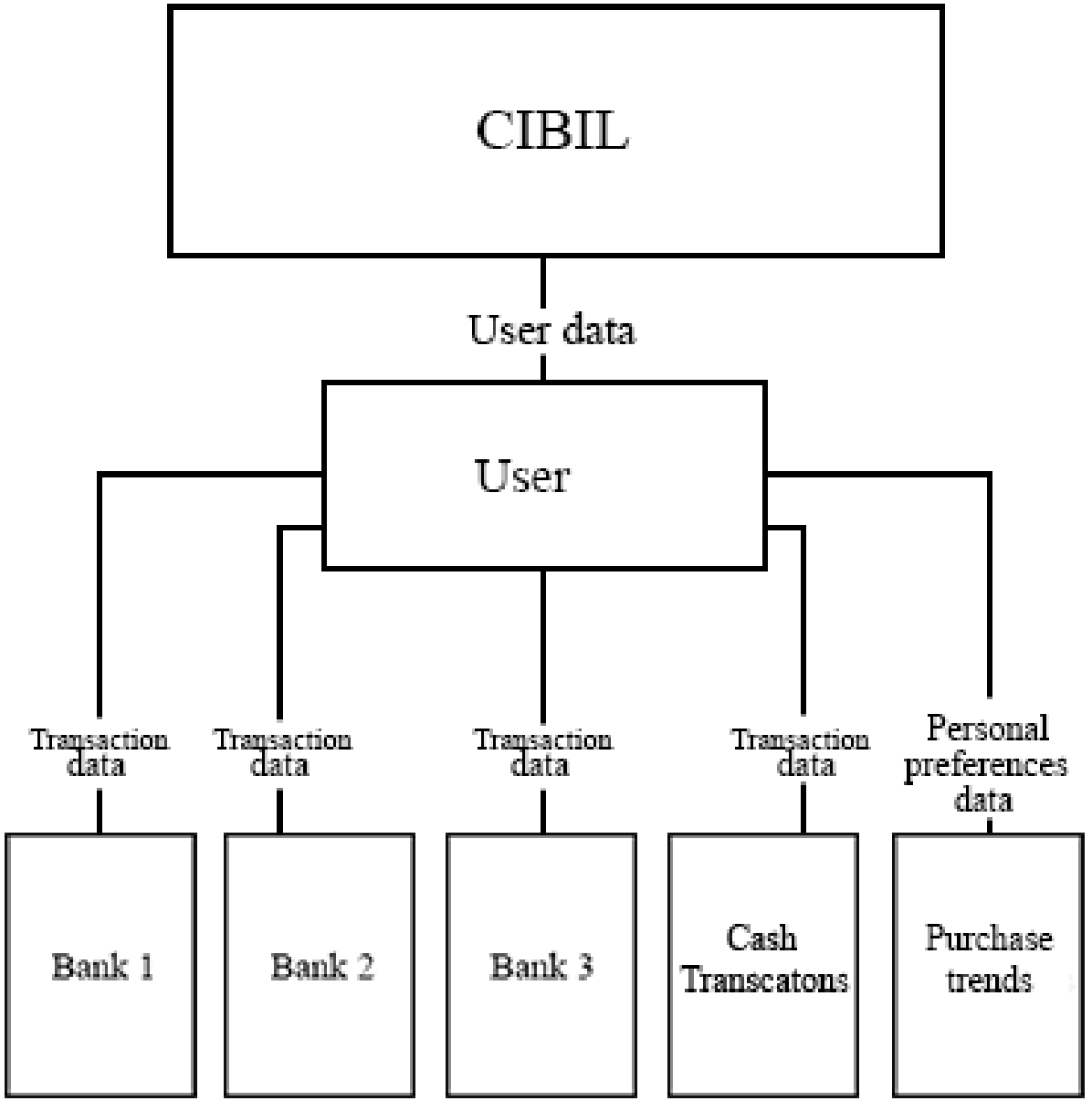
COLLECTING DATA FROM BANKS

- Multiple Sources for one user
- Alternate payment data such as utility bills, cheque bounces, insurance premiums, rentals etc.
- Not automatic

NON INCLUSION OF NON FINANCIAL PARAMETERS

- No attempt at understanding the background of a person
- People who have no access to formal channels of credit have a zero score
- The reputation of consumers and the connections they have in society play no role in how their credit score is derived.

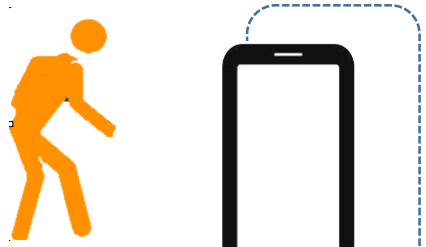
MODEL PROPOSED



DATA COLLECTION

Collecting Data From Smartphones

Android Broadcast Listeners



Android app present with each user

Captured SMS

SMS Sender Information Checked
SMS Mapped to Pre-set Template

Parameters Captured :
Bank – SBI
Card Number – XXX5346
Debit Amount – Rs. 1000
Account Balance – Rs. 10000

Background Service

Thank you for using your SBI card XXX5346 for a transaction of Rs. 1000 at FlipKart. Current Account balance is Rs. 10000

DATA COLLECTION

Collecting Data From Smartphones

SMS : A rich source of Information

Your Car Loan EMI payment of Rs. 5000 is due.

Timely Payments of EMI

The bill for your Airtel postpaid mobile of Rs. 100 is received.

Timely Bill Payments

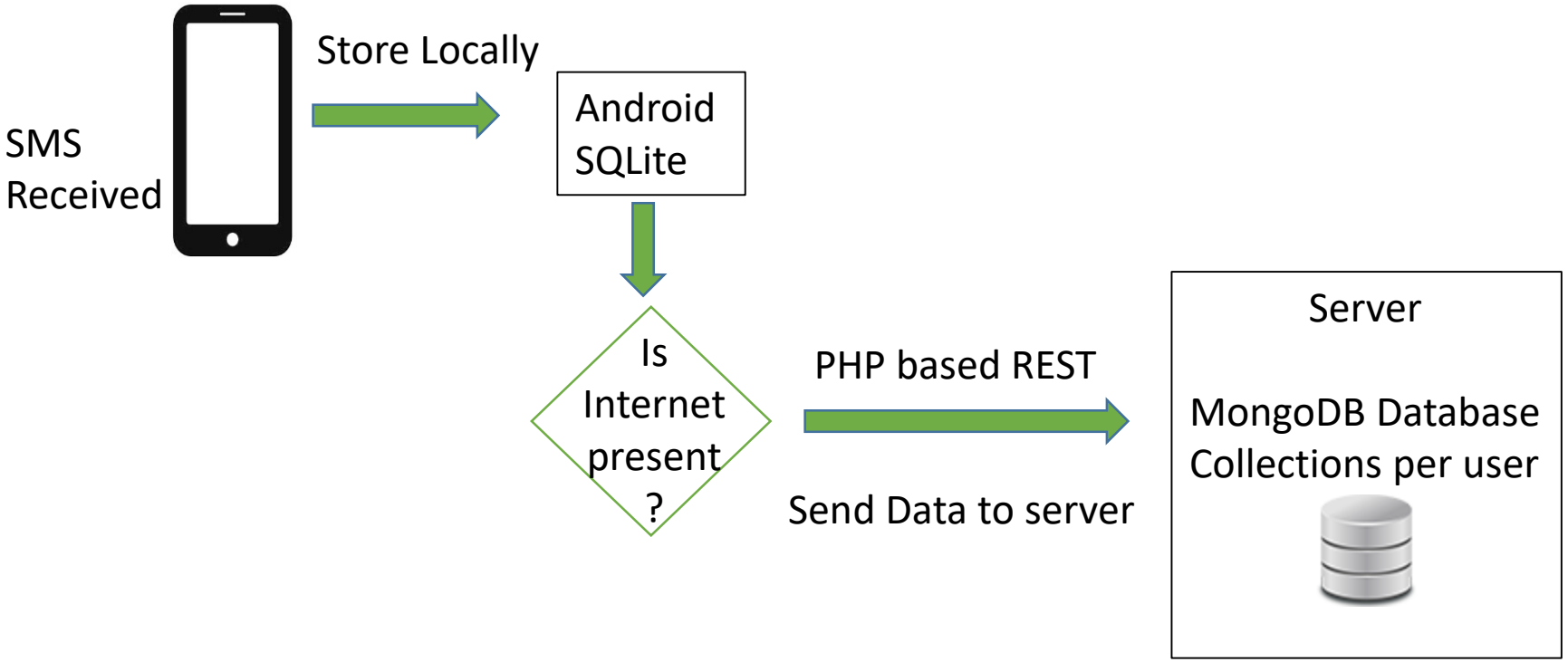
Your A/C No xxxx6884 has been credited by Rs. 50000. A/C balance is Rs. 60000

Salary/ Income

DATA COLLECTION

Collecting Data From Smartphones

Sending Data



DATA COLLECTION

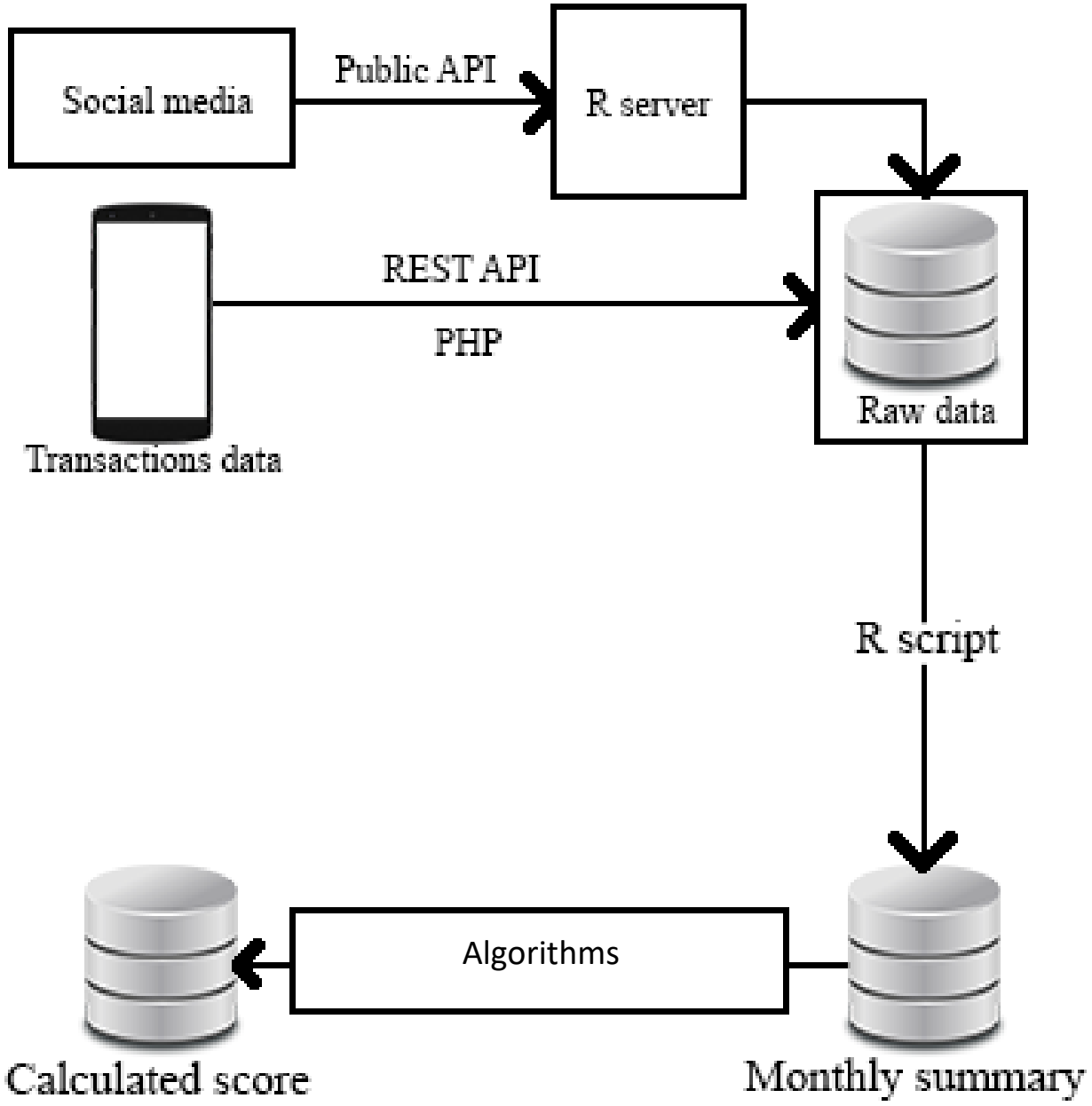
Collecting Data From Social Media

Social Networking sites – Insights into nature and status of a person

Proposed Data Capture :

1. Educational details
2. Family members
3. Followers count
4. Sentiment of content
5. Locations checked in at
6. Professional background

OVERALL ARCHITECTURE



Technology stack

Android application

PHP – Android to MongoDB REST APIs

MongoDB

R studio – Data pre-processing and processing

Android database

Apache server for REST APIs

Twitter APIs

Summary collection in mongoDB for a particular user


```
{
        "_id" : ObjectId("57ecd2787c170d8b9dbd7972"),
        "name" : "reshul",
        "twitter_handle" : "Reshul_Dani",
        "score" : 300,
        "tweets_sentiment" : 0,
        "twitter_followers_count" : 26,
        "twitter_friends_count" : 34,
        "number_transactions_credit" : 3,
        "number_transactions_debit" : 4,
        "totalamount_transactions_credit" : 1500,
        "totalamount_transactions_debit" : 1200,
        "averageamount_transactions_credit" : 500,
        "averageamount_transactions_debit" : 300,
        "total_bank_balance" : 2800,
        "no_of_accounts" : 3,
        "no_of_banks" : 3
}
```

Uses

Financial inclusion for people with less/minimal bank history

Easy availability of purchasing power in emergencies

Users tend to spend more – psychological impact

KYM

Wallet that gives micro loans,
at no added costs

Machine learning

Currently fixed weightage allocated to parameters –
Lack of training data

Deploy application for trial run –
Rule based credit increment during trial run
Collect data relating profiles with ability to repay

Using this training data, train SVM classifier and then use the model to classify new users.

Business plan

Partner with vendors to integrate Kym into their systems