

TITLE

FinTech

Sub-Track AI


HACKCELERATE

Still Thinking

PROBLEM STATEMENT

ISSUE : Users lose ₹8,000-15,000/year to forgotten subscriptions

WHY NO ONE NOTICES:

- Small charges (₹99-₹499) go unnoticed in transactions
- No system detects patterns from both transactions AND emails
- Subscription confirmations lost in Gmail inbox → forgotten

ISSUE :

- Rocket Money, Trim = Paid + Manual
- Bank apps = No automation
- No solution for Indian formats

GAP : Millions of Indians × ₹15,000/year = HUGE untapped market

SOLUTION

OUR APPROACH: AI + ML + NLP + Gmail Intelligence for Automatic Subscription Detection

Dual-source detection: Analyze transactions + Gmail for ALL hidden subscriptions.

OAuth2 read-only access means we never store passwords or full emails.

- **01 | AI Pattern Detection**

Analyze transaction history → identify recurring payment patterns automatically

- **02 | Gmail Inbox Scanning (Secure & Private)**

Search for confirmation emails: "Welcome to Netflix!", "Your Prime membership"

OAuth2 read-only → extract data, never store emails

- **03 | Smart Risk Scoring**

Label: Low/Medium/High Risk | Forgotten: No activity 3+ months

- **04 | Actionable Dashboard**

Results: Monthly cost, yearly savings, one-click recommendations

CHALLENGES & MITIGATIONS

1

Inconsistent and unclear transaction descriptions make it difficult to accurately identify subscription-based payments across different banks and platforms.

2

Limited access to real-time transaction data due to dependency on third-party banking APIs and user permissions affects detection accuracy.

3

Natural Language Processing (NLP) techniques are used to normalize merchant names and group similar transactions for better identification.

4

A hybrid approach combining rule-based logic and machine learning improves detection even with limited or irregular transaction data.

5

The system supports both API-based and offline transaction data while ensuring secure, consent-based, and encrypted data handling.

ADDITIONAL INFO

WHAT WE BUILD:

- CSV + Gmail dual scanning | Renaissance Parser | Risk scoring
- Savings calculator | Privacy-first (encrypted, GDPR)

COMPETITIVE EDGE:

- Works all Indian banks (HDFC, ICICI, Axis, PayPal)
- Complete privacy = zero-data retention

MARKET OPPORTUNITY:

- 10M+ users × ₹15,000/year = ₹1,500+ Crore TAM
- B2B: Bank integration | B2C: Freemium model

FUTURE: Banking APIs → Auto-cancellation → Mobile app → Predictive analytics

TECH STACK

FRONTEND : React.js (Vite) & Tailwind CSS + Recharts
(Modern UI, data visualization)

BACKEND API : FastAPI + Uvicorn
(Async REST endpoints, production-ready performance)

EMAIL INTELLIGENCE: Gmail API + OAuth2
(Read-only access, email parsing, keyword extraction)

DATA SECURITY & PRIVACY : In-Memory Processing
(No permanent data storage , Privacy-first)

DATA PROCESSING & PATTERN DETECTION : Pandas + Statistical Analysis
(Transaction cleaning & normalization)

TEAM MEMBERS

Team Name

Tamizharasan R	Sathyabama University	Chennai	Team Lead + Backend Developer	Male
Kaleeswaran M	Sathyabama University	Chennai	NLP Engineer & Algorithm Optimization	Male
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