

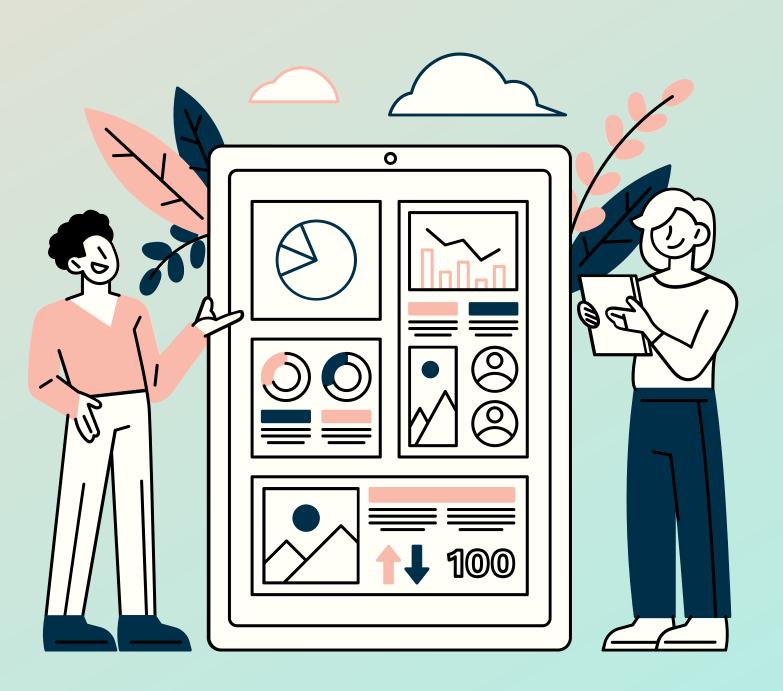
SPHINX 24 HACKATHON SUBMISSION ROUND

TEAM IFGLA UNIVERSITY
MATHURA, U.P

Developing an automated bill-splitting app to offer the users a seamless way to handle shared expenses effortlessly and conflict-free.

With transparent tracking, receipt scanning, and smart categorization, this project ensures accuracy in dividing costs.

PROBLEM STATEMENT



Why this Problem Statement?

PROBLEM

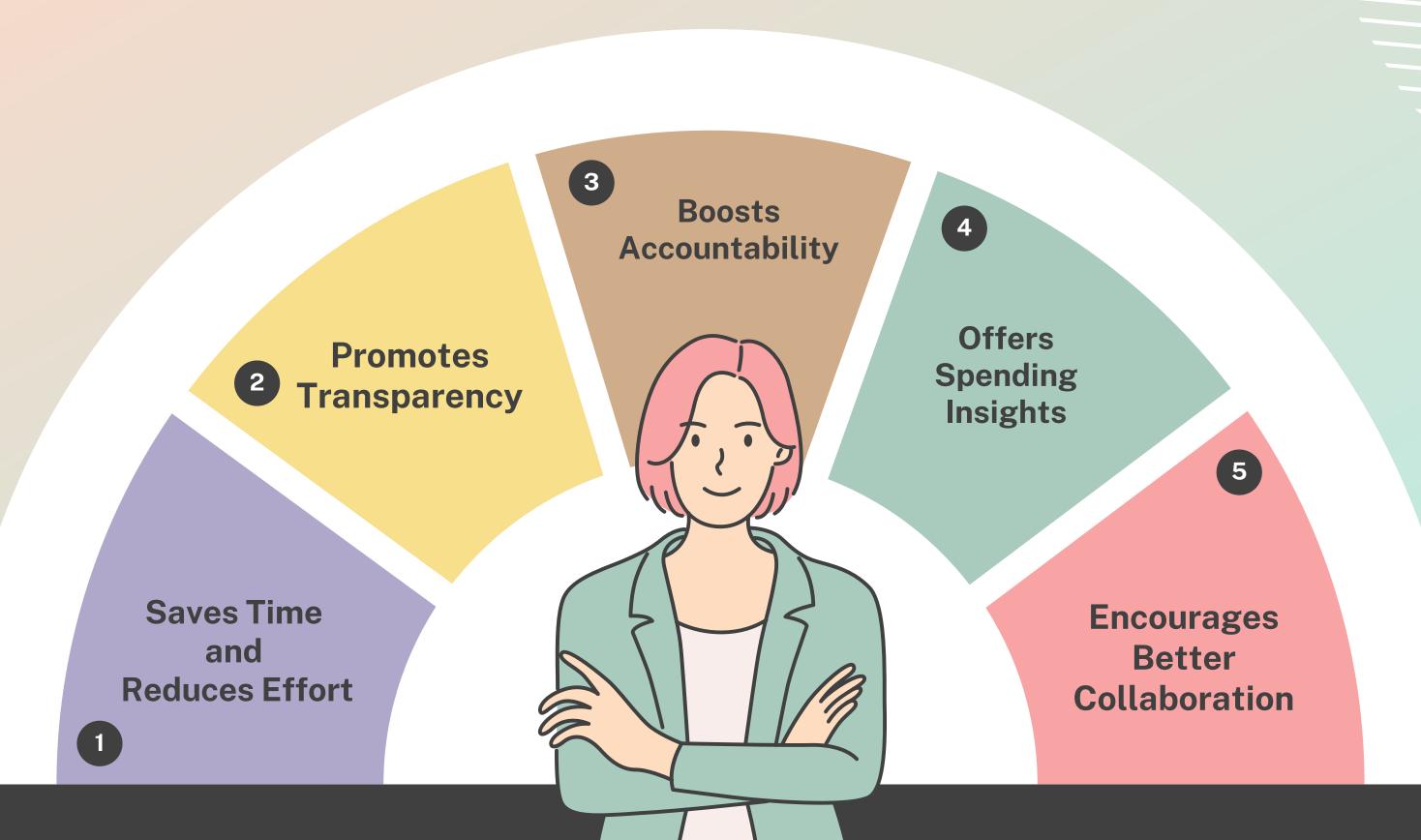
- Splitting bills and expenses is often tedious and errorprone.
 - Manual calculations of individual shares are time-consuming.
 - Tracking balances and ensuring everyone pays their share accurately is challenging.

SOLUTION

- Addresses these challenges with a seamless, automated solution.
- Simplifies the process, eliminating manual calculations and reducing errors.
- Features like receipt scanning make logging expenses quick and easy.

VS

How is this Helpful?



TEAM IF

RECEIPT SCANNING & OCR

Users can easily upload receipt photos, and the app will extract crucial information like total amount, date, store name, and individual items.

NOTIFICATION SYSTEM

The app will send reminders and updates to users, keeping them informed about upcoming payments and balances.

EXPENSECATEGORIZATION

The app will automatically categorize expenses using machine learning, allowing users to quickly see where their money is going.

01 O5 Users

KEY FEATURES

INTEGRATION Users can seamlessly

PAYMENT

transfer money
between each other
through the app,
making the payment
process simple and
convenient.

CUSTOM CATEGORIZATION

Users can also create their own custom expense categories to better suit their needs.

RUNNING BALANCES

The app tracks user balances, ensuring everyone knows who owes what and preventing disagreements.

SMART SPLITTING OPTIONS

04

The app offers various billsplitting options, including equal split, percentagebased split, item-based split, and custom amounts.

02

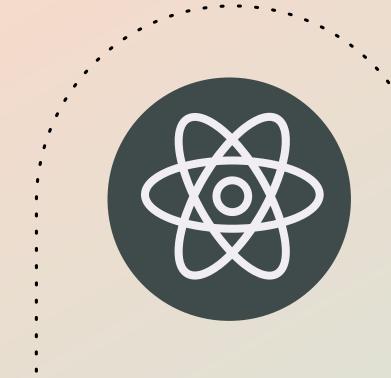
03

GROUP MANAGEMENT

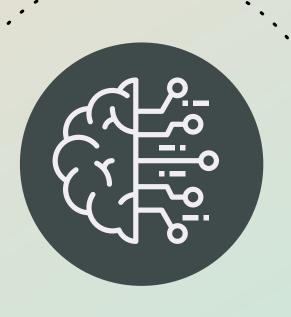
Users can create groups for regular bill splitting (e.g., roommates) and manage friend lists.

08

TECH STACK









Frontend

Backend

Machine Learning

Notifications & Deployment

React Js

Node.js

Google Vision API

Python

AWS S3

Tailwind css

Express.js

Heroku

React Router

Firebase Cloud

Messaging

Multinomial Naive Bayes

Firebase Cloud Messaging

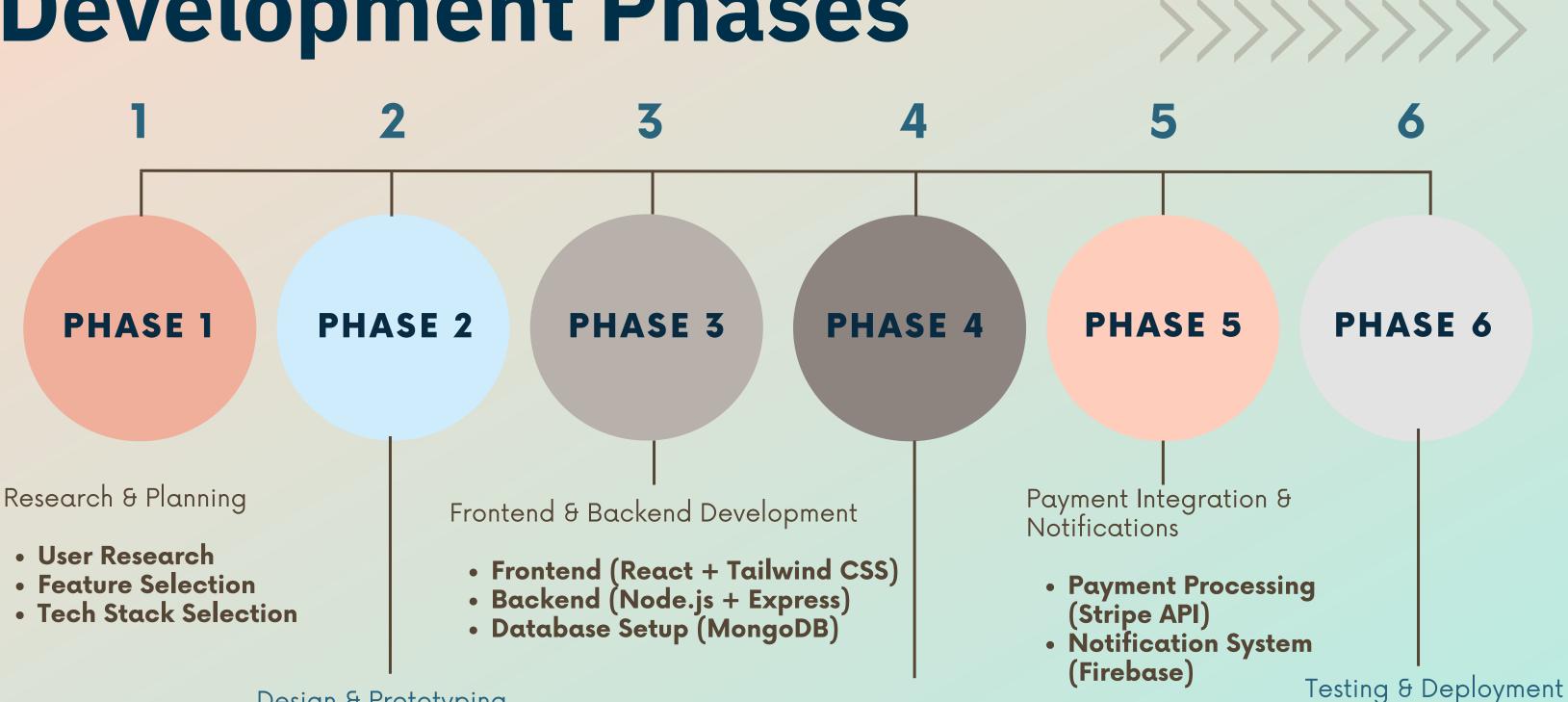
Axios

MongoDB/NoSQL

Scikit-Learn

Docker

Development Phases



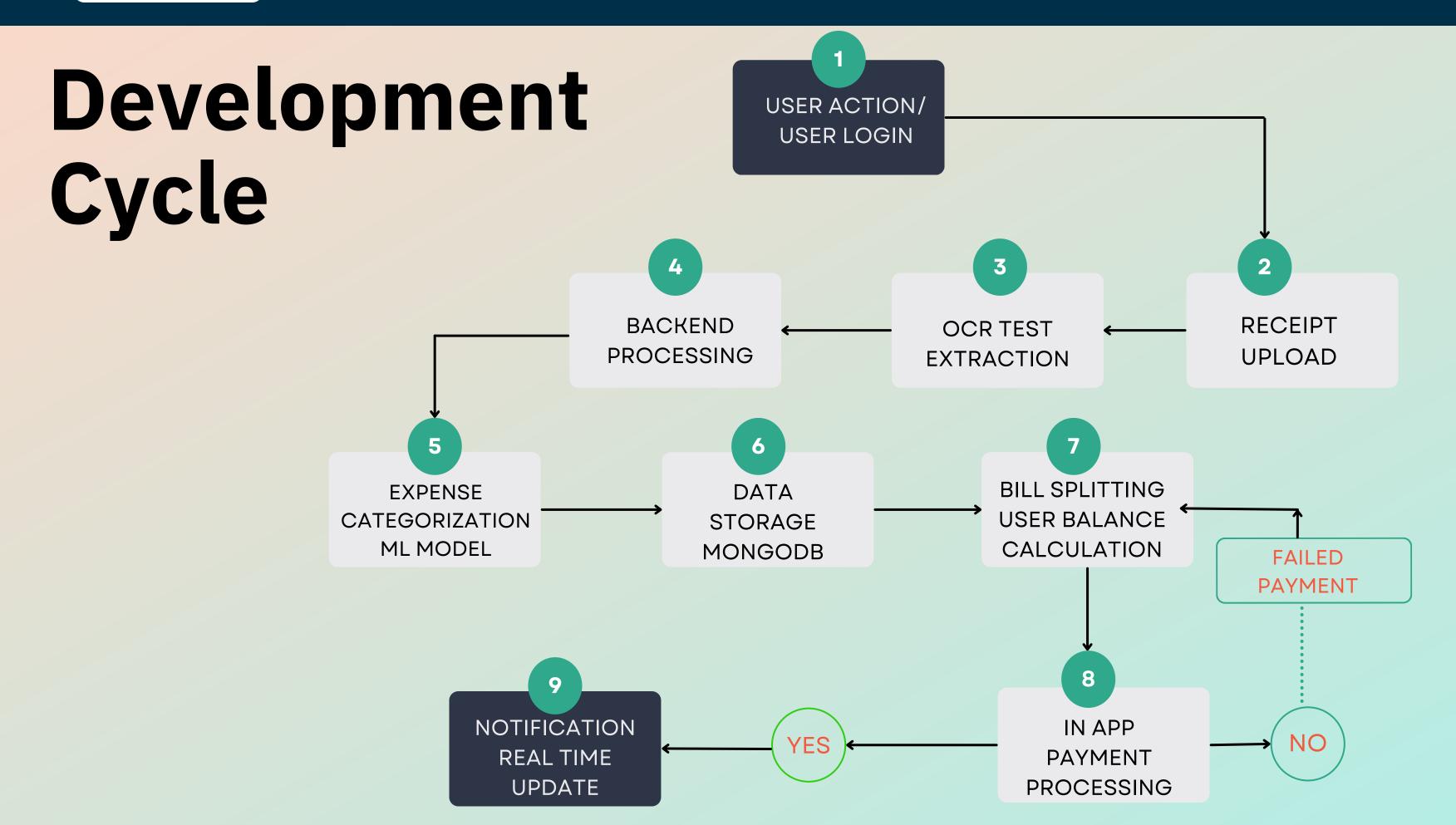
Design & Prototyping

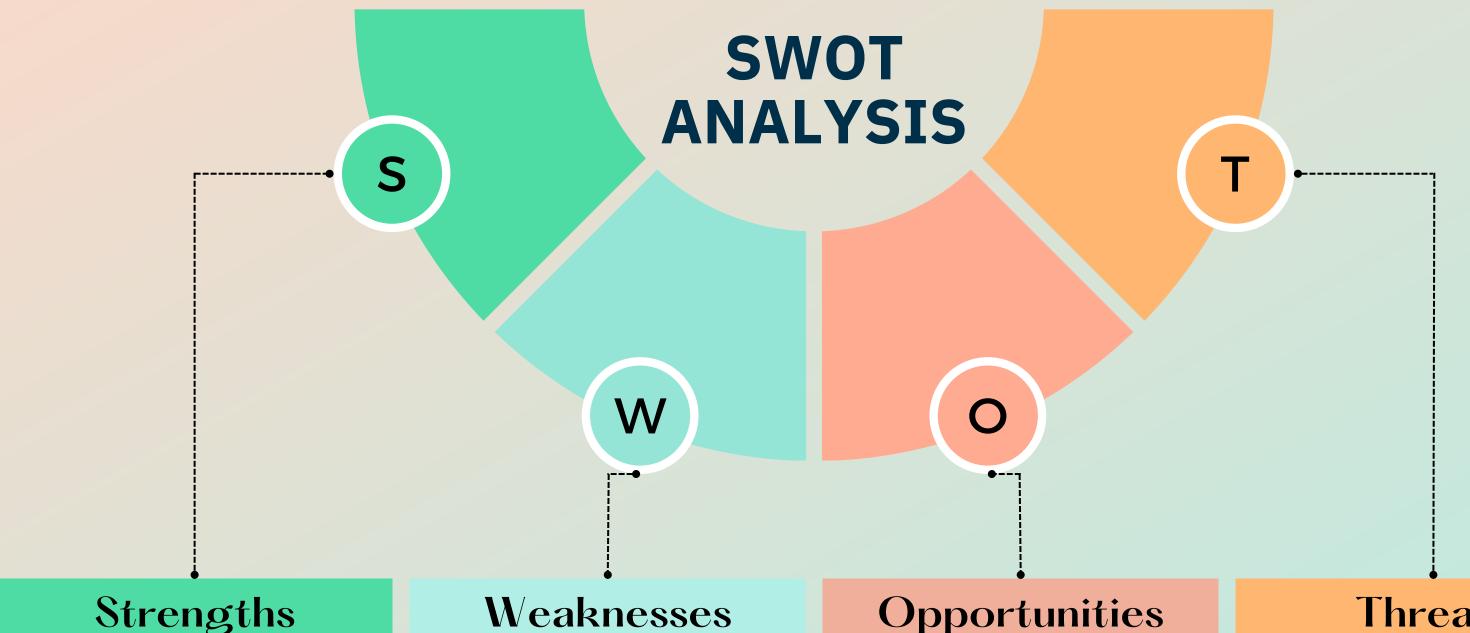
- Wireframing
- User Flow Design
- UI/UX Prototyping

OCR & Machine Learning Integration

- Google Vision API for OCR
- Machine Learning Model (Python)

- Unit Testing
- Integration Testing
- User Testing
- Deployment





- User-Friendly Interface
- Automated Features
- Custom Splitting Options
- Transparency & Accountability
- Integrated Payment Processing

- Dependency on External APIs
- Learning Curve
- High Initial Development Time

- Growing Demand for Financial Apps
- Potential for Expansion
- Collaboration with Financial Services
- Adoption by Groups & Organizations

Threats

- Competition from Established Apps
- Data Privacy & **Security Concerns**
- API Limitations
- User Retention Risks

TARGET MARKET

Demographic Segmentation

Age: 18-45 yearsGender: Unisex

• Income Level: Middle to upper-middle income

• **Occupation**: College students, young professionals, freelancers

• **Education Level:** Secondary education and above

Geographic Segmentation

• **Primary Locations:** Urban and suburban areas with active social scenes

Regions: Targeting India initially, expanding globally eventually

• **Mobility:** Users in shared housing or frequent travelers with shared expense needs

Psychographic Segmentation

• **Lifestyle**: Socially active, budget-conscious, and tech-savvy

• **Values**: Convenience, fairness, and transparency in managing shared expenses

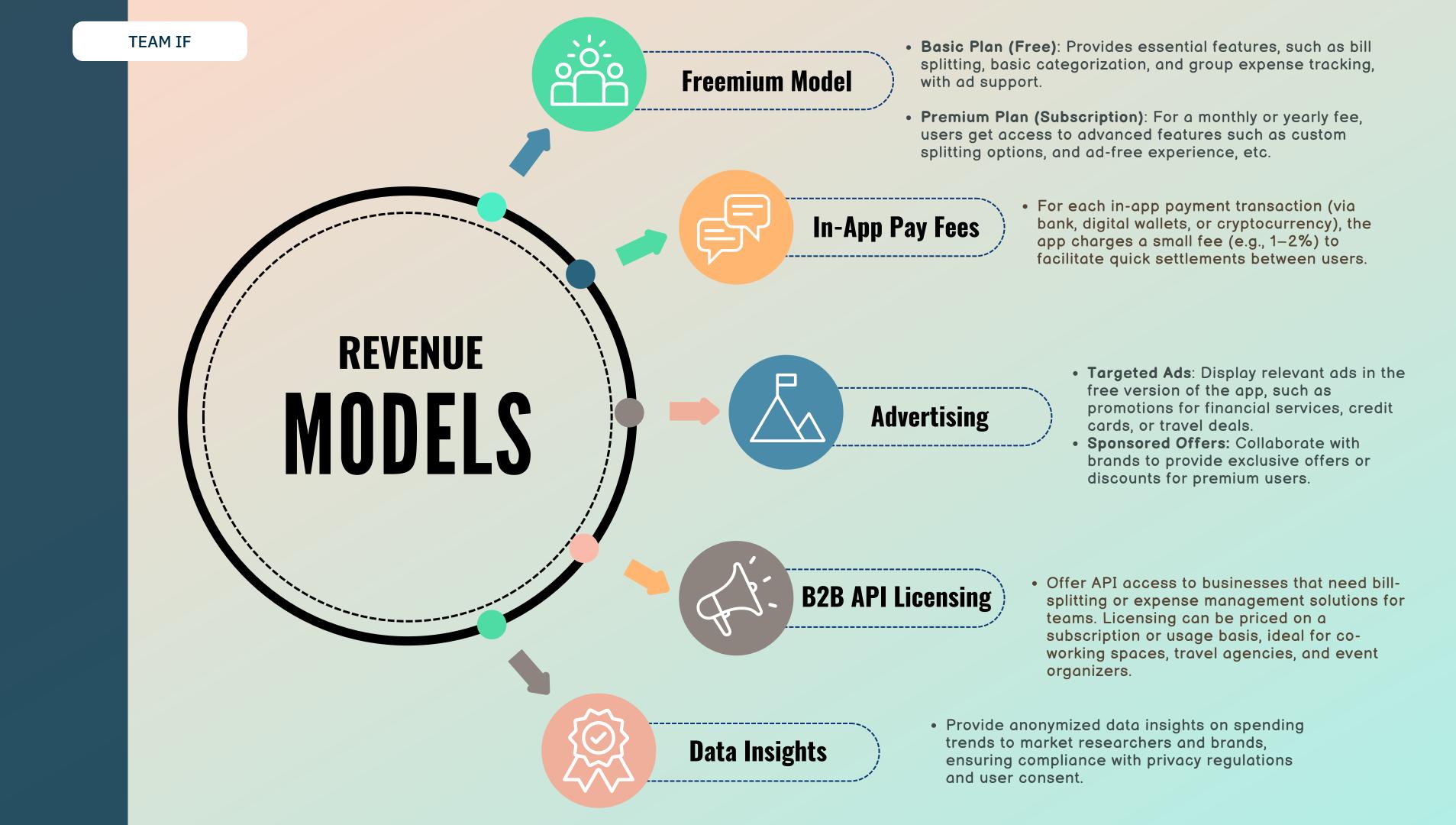
• **Pain Points:** Finds manual expense sharing methods inefficient and often conflict-prone

Behavioral Segmentation

• **Usage Patterns:** Regular bill splitting with friends or roommates

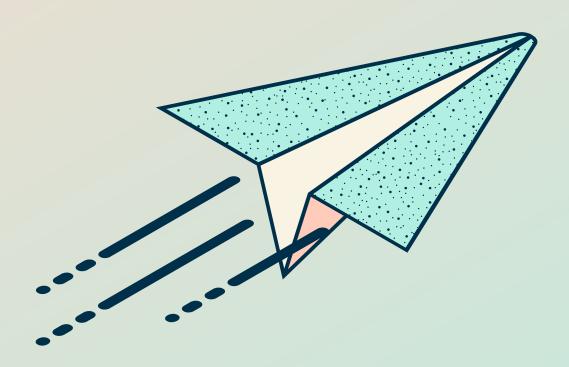
• **Buying Behavior:** Adopts digital payment solutions

• **Financial Awareness:** Actively tracks spending, values financial insights



FUTURE PROSPECTS

EXPANSION ENHANCEMENT GROWTH



01

B2B Partnerships

Extend the app's capabilities to small businesses or workgroups that frequently manage shared expenses

02

Integration with Social Platforms

Enable the app to work alongside platforms like WhatsApp, Slack, or Facebook Messenger

03

International Payment Support

Incorporate more global payment platforms (like PayPal, Paytm, Alipay) to facilitate international transactions

Meet Team IF



Duanshi ChawlaB-Tech (CS)

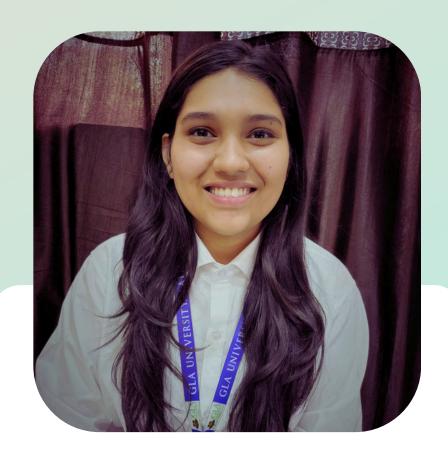
- MERN Stack
- Presenter



Harsh Gautam

B-Tech (CS)

- Machine Learning
- Team Management



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B-Tech (CS)

- MERN Stack
- Project Planning

ACKNOWLEDGEMENT



We, the members of **Team IF**, would like to express our heartfelt gratitude to **Team Sphinx** and **MNIT Jaipur** for organizing **Sphinx 2024** and providing us with this inspiring platform.

This hackathon is a fantastic opportunity for us to showcase our creativity, technical expertise, and innovation. We appreciate the dedication and effort that goes into making this event possible, and we are excited to present our project and learn alongside our peers.

Thank you for considering our submission and for supporting our journey toward growth and excellence.

Thank You!

If you have any further questions, please don't hesitate to contact us:

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