

EY Techathon 5.0 Executive Summary

23rd November 2024



**Shape the future
with confidence**

Our TEAM

Team: **Arasiyal-Anugundu**

Problem Statement: **AI-powered financial advisor for rural India.**



Rohith Ganesh Kanchi

Team Lead & AI Engineer

rohithganesh.kanchi2023@vitstudent.ac.in

Vellore Institute of Technology, Chennai

+91 73056 36052



Giridharen G

Machine Learning Engineer

giridharen.2023@vitstudent.ac.in

Vellore Institute of Technology, Chennai

+91 73973 82046



Jayashre

Full Stack Developer & Blockchain Developer

jaya2004kra@gmail.com

Shiv Nadar University, Chennai

+91 63822 30940

Solution: **Mobile App with Voice Assistance.**

Executive Summary

EmpowerAI: Empowering Rural Women with AI-Driven Financial Independence

EmpowerAI is an **AI-powered platform** designed to address the **financial literacy and accessibility** challenges faced by **rural women** like Lakshmi, an aspiring entrepreneur from Odisha. The platform offers **personalized financial education, budgeting tools, micro-investment opportunities**, and **secure banking services**, all accessible in regional languages through **voice-enabled AI**.

Key Features

Voice-First Financial Education



Tailored learning modules for users with varying literacy levels.

Personalized Budgeting & Investment



AI-driven recommendations based on individual financial goals.

Blockchain-Backed Savings Groups



Transparent and secure community savings for micro-loans.

AI Powered Mentorship



Connecting users with successful female entrepreneurs and financial advisors.

EmpowerAI is designed to be **inclusive**, with **offline accessibility** and **gamified learning** to ensure engagement and impact. Its unique combination of **AI, blockchain**, and **emotional intelligence** provides a **scalable, secure**, and **sustainable solution** to empower rural women to take control of their financial futures.

Problem Statement

Target Industry: Financial Inclusion and Empowerment

Industry Type: B2C

User Group: Rural women, particularly those with low to no formal education, aspiring for economic independence through micro-entrepreneurship.

User Department: Individual financial management and rural entrepreneurship.

Solution Scenario: **Lakshmi**, a widow from a rural village in Odisha, dreams of starting a dairy business to provide a better future for her children. However, her lack of **financial literacy and access to personalized financial products** has made her fearful of navigating the complex financial landscape. **EmpowerAI** offers her a **simple, voice-enabled platform** that delivers personalized **financial education, budgeting tools, and tailored investment options** in her local language. The platform provides **a safe, accessible environment** where **Lakshmi** can learn about managing her finances, receive mentorship, and confidently take steps toward entrepreneurship with **AI-powered micro-loan suggestions and savings advice**.

Data Flow

Processing

Flow

Data Capture

User inputs are collected via **voice interface or simple text forms**, capturing essential details such as **income, savings, financial goals, and preferences**.



The platform's **AI algorithms analyze the data, providing personalized financial guidance** such as **budgeting, investment recommendations, and micro-loan eligibility** based on the **user's financial profile**.



Outputs are delivered via **voice-based recommendations, gamified learning modules, and financial plans**, with **secure blockchain-backed transactions** for any **micro-loans or savings group contributions**.

Methodology / Approach

Value Proposition

EmpowerAI bridges the gap in **financial literacy and accessibility** for rural women by offering **an intuitive, voice-enabled platform with AI-driven mentorship, gamified learning, and secure, transparent savings solutions.**

Impact Metrics

- **Improvement** in **financial literacy scores** (measured through pre- and post-engagement assessments).
- **Increase** in **savings and investments** via **group savings and individual accounts**.
- **Adoption rate** of **micro-loans and government-backed financial schemes**.
- **Reduction** in **loan default rates** through **personalized financial education**.

Technologies Used

- **Languages/Frameworks:** Python, JavaScript, Next.js, Tailwind CSS, TensorFlow.
- **APIs/Platforms:** Mozilla DeepSpeech (voice recognition), GPT-3 (NLP), Firebase (backend).
- **Blockchain:** Hyperledger Fabric for secure savings and transparent transactions.
- **Tools:** Unity for gamification, TensorFlow for sentiment analysis.

Assumptions, Constraints and Decision Points

- **Assumptions:** Rural users have **access to basic smartphones** and prefer voice-based interfaces over text.
- **Constraints:** **Limited internet connectivity** necessitates **offline-first functionality**.
- **Decision Points:** Chose a **voice-first AI design** for accessibility; opted for **blockchain to ensure transparency and trustworthiness in savings mechanisms**.

Ease of Implementation & Effectiveness

- **Ease:** Modular, scalable components allow quick deployment in diverse regions.
- **Effectiveness:** Tailored design addresses barriers like literacy and connectivity while fostering financial independence.

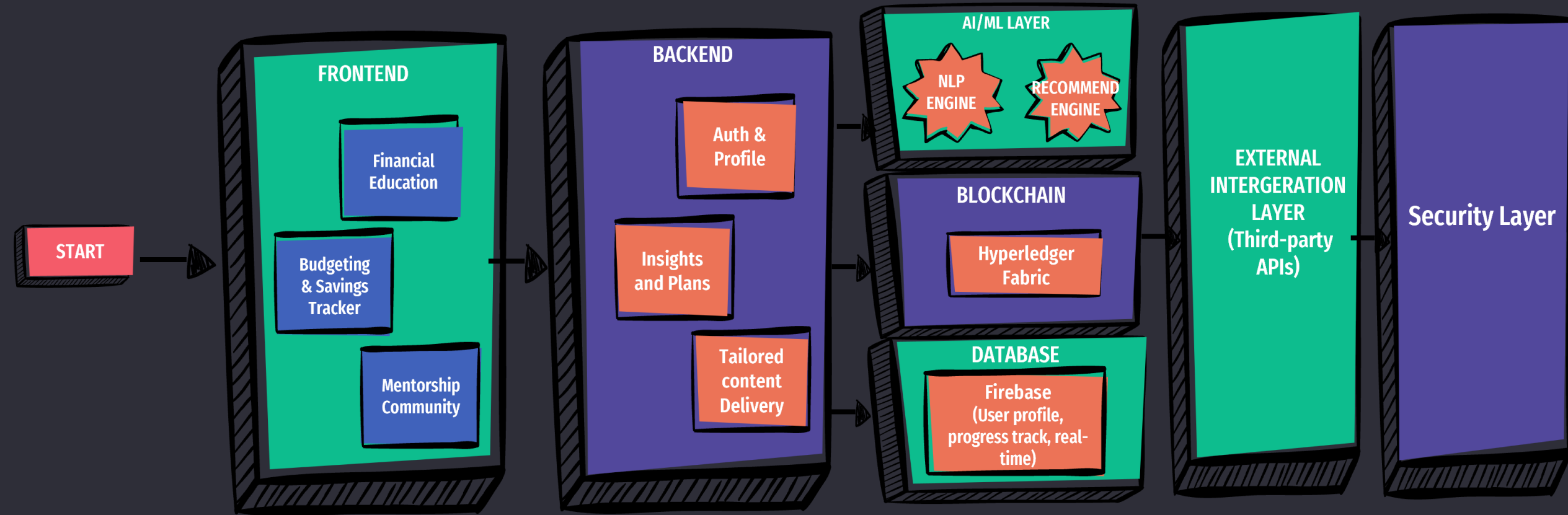
Scalability & Security

- **Scalability:** **AI backend** supports multi-language expansion; **modular architecture** adapts to sectors like health, agriculture, and education.
- **Security:** Tailored **design addresses** barriers like **literacy and connectivity** while fostering financial independence.

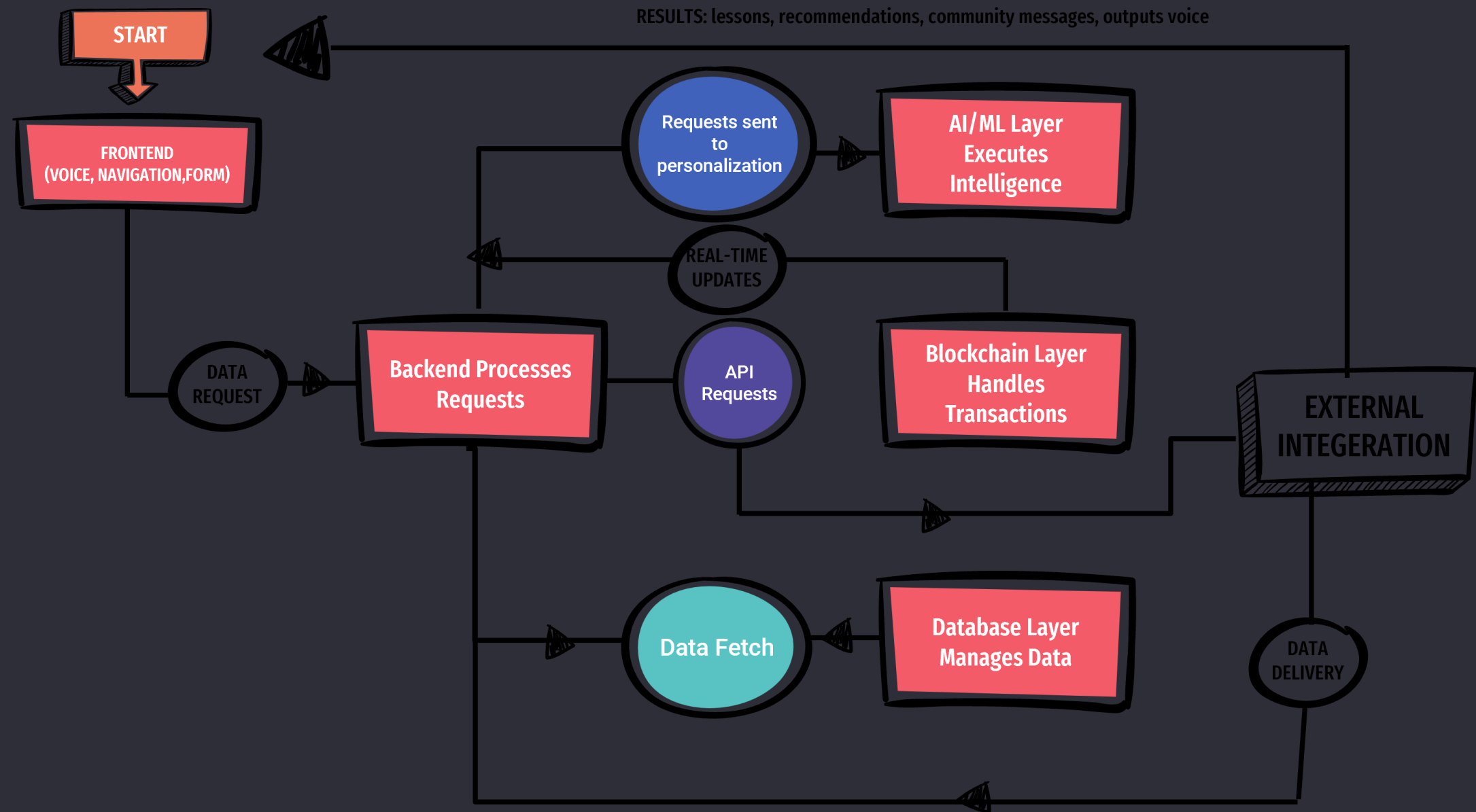
Demonstration Components

- AI-powered voice assistant for financial education in regional languages.
- Blockchain-backed digital savings and micro-loan platform prototype.
- Gamified financial literacy module.
- Personalized financial mentorship powered by AI.

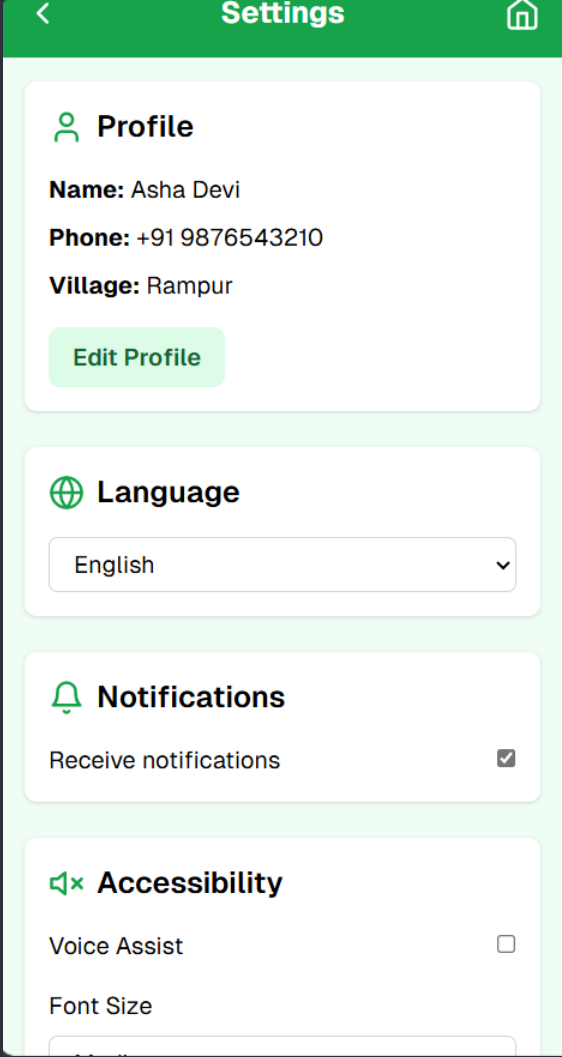
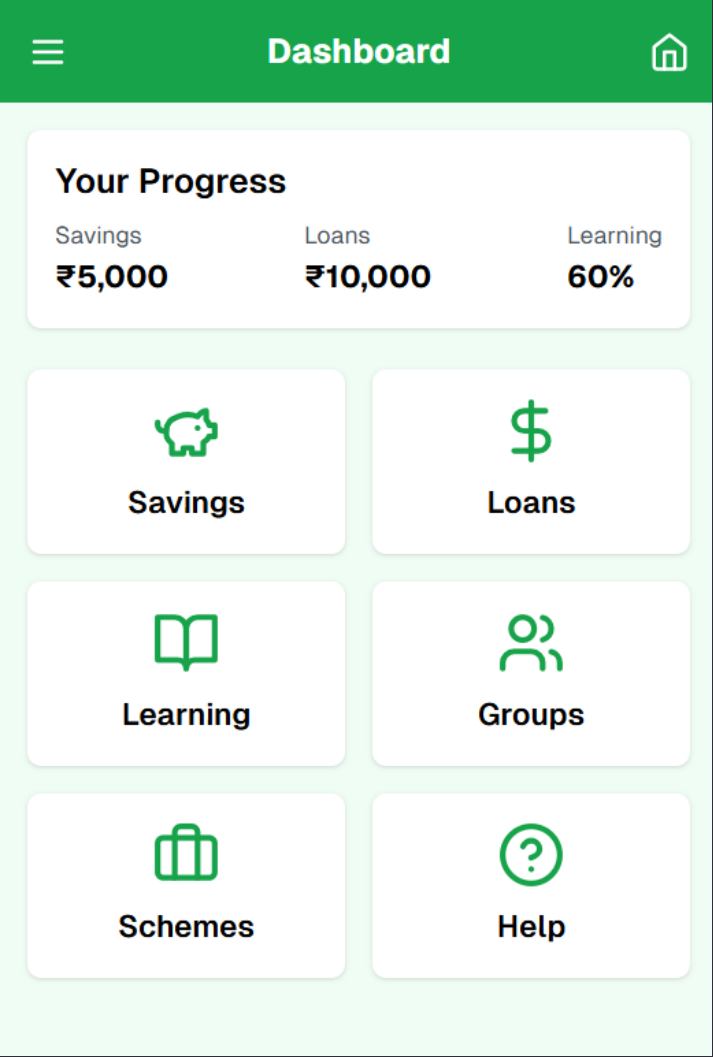
Architecture Diagram



Flow Chart



Wire Frames



Thank you

Date of submission: 12th January 2025



**Shape the future
with confidence**