

AI for Bharat Hackathon

Powered by **aws**



Team Name : **Vahini**

Team Leader Name : **Divyanshu Patel**

Problem Statement : Build an AI-powered solution that improves access to information, resources, or opportunities for communities and public systems.

Brief about the Idea:

The Problem

78 Million

eligible citizens miss out on **₹1.2 Trillion** in annual government benefits

Low Connectivity



400M users on 2G networks; text-heavy apps unusable

Language Barriers



70% rural India speaks local languages;
info exists only in English/Hindi

Digital Illiteracy



450M Indians cannot read or navigate digital interfaces

Our Solution: SchemaSetu

A **multilingual, voice-first AI platform** that helps citizens discover, understand, and apply for government welfare schemes in minutes **accessible on basic phones with minimal data, available 24/7 in their own language.**



100% Voice Interface
Zero reading required



Proactive AI Agent
Calls users when eligible



22+ Languages
Including 40+ dialects



Works on 2G
500KB per query

"The First AI That Calls the Farmer"

How Is It Different?

Feature	Existing Solutions	SchemaSetu
Voice Interface	✗ Text-only	<input checked="" type="checkbox"/> Primary mode
Language Support	3-4 languages	22 languages + 40 dialects
Connectivity	Requires 4G/WiFi	Works on 2G (500KB)
Intelligence	Keyword search	ML matching (92% accuracy)
User Experience	Reactive (user asks)	Proactive (AI calls user)
Memory	None	Household context persists
Offline Access	✗ Not available	<input checked="" type="checkbox"/> IVR + Missed Call

How Will It Solve the Problem?



Literacy Barrier

100% voice interface in 22+ languages and 40+ dialects—no reading required



Connectivity Barrier

Hybrid architecture: WhatsApp when online, IVR calls when offline; works on 2G



Awareness Gap

AI analyzes household profile against 1000+ schemes, proactively alerts about eligible benefits



Process Complexity

Voice-guided micro-tasks with document photo capture and AI-powered form filling

Our Unique Selling Propositions

1

Voice-First for 450M Digital Illiterates

9x higher adoption than text apps; reaches the unreached

2

Proactive AI That Calls Users

First solution that reaches out when schemes open—not reactive

3

Works on 2G Networks

500KB per query; 95% less data than competitors; 400M rural users

4

ML-Based Eligibility Matching

92% accuracy vs 40% keyword search; 5x higher conversion

Features Offered



Voice Interaction

- Voice query input
- Real-time transcription
- 22 language support
- Voice biometric auth



AI Intelligence

- ML eligibility matching
- Household memory graph
- 92% accuracy scoring
- Proactive voice alerts



Guidance & Support

- Simplified explanations
- Document checklist
- Step-by-step application
- Status tracking



Accessibility

- Works on 2G/feature phones
- IVR + WhatsApp + SMS
- Offline missed-call trigger
- 24/7 availability

Process Flow: User Journey

SchemaSetu Process Flow - Voice-First Government Scheme Discovery



Use Case: Farmer Scenario

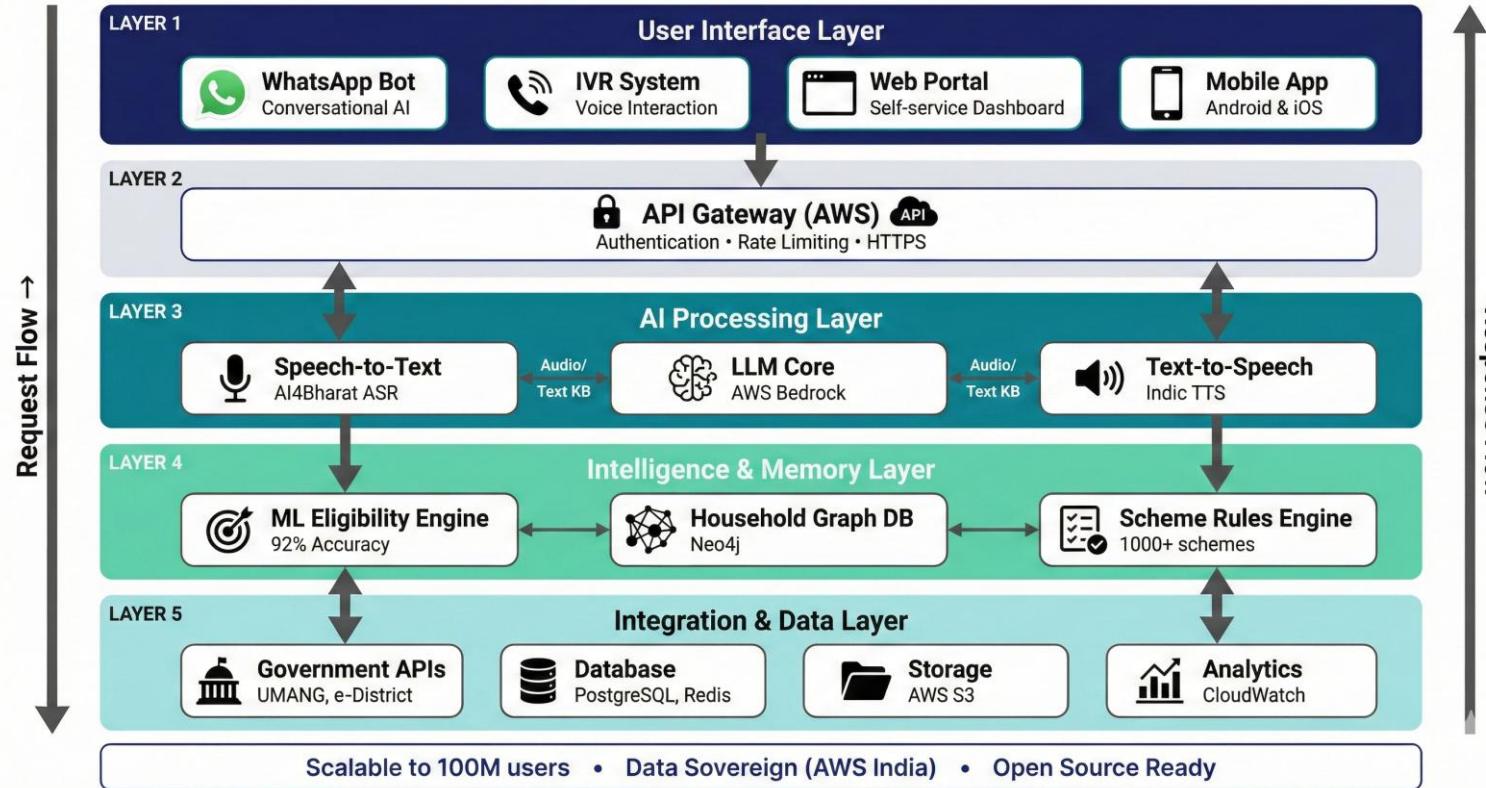
Real-World Use Case: Farmer Ramesh discovers PM-KUSUM Solar Pump Scheme



Total Time: 8 minutes | Documents: 2 photos | Data Used: 450KB

System Architecture

SchemaSetu Technical Architecture - Multilayer AI System



Technologies to be Used

Voice & NLP

- AI4Bharat ASR/TTS
- Whisper Speech Recognition
- Bhashini Translation
- AWS Bedrock (LLM)

ML & Intelligence

- Scikit-learn (92% accuracy)
- Neo4j (Memory Graph)
- XGBoost Classifier
- Hugging Face Transformers

Backend & Infrastructure

- Node.js + FastAPI
- PostgreSQL + Redis
- AWS Lambda + ECS
- WhatsApp Business API

Integration & Access

- IVR (Twilio/Exotel)
- Government APIs (UMANG)
- SMS Gateway (AWS SNS)
- CSC Network Integration

Estimated Implementation Cost

MVP Development

3 months

₹12 Lakhs

1,000 users pilot

Pilot Deployment

6 months

₹30 Lakhs

50,000 users

State-wide Scale

12 months

₹1.5 Crores

1M users

Monthly Operational Cost (1M users): **₹40 Lakhs** | Per-User: **₹4/month**

Expected Impact

**1M
Citizens**

Access ₹2,000 Cr benefits
in Year 1

**400M+
Users**

Rural/non-digital users
reached

15 Minutes

Down from 3-4 hours per
application

- Enable data-driven policy making for government
- Build open infrastructure for 10+ ministries to adopt
- Create training dataset for Indian AI ecosystem
- WCAG 2.1 AAA accessible - first of its kind

Let's Bridge the Information Gap
Team Vahini | SchemaSetu

Innovation partner **H2S**

Media partner **YOURSTORY**

AI for Bharat Hackathon

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Thank You

