

# AI for Bharat Hackathon

Powered by **aws**



Team Name : **Vahini**

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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	✓ 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	✓ 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 unreachable

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

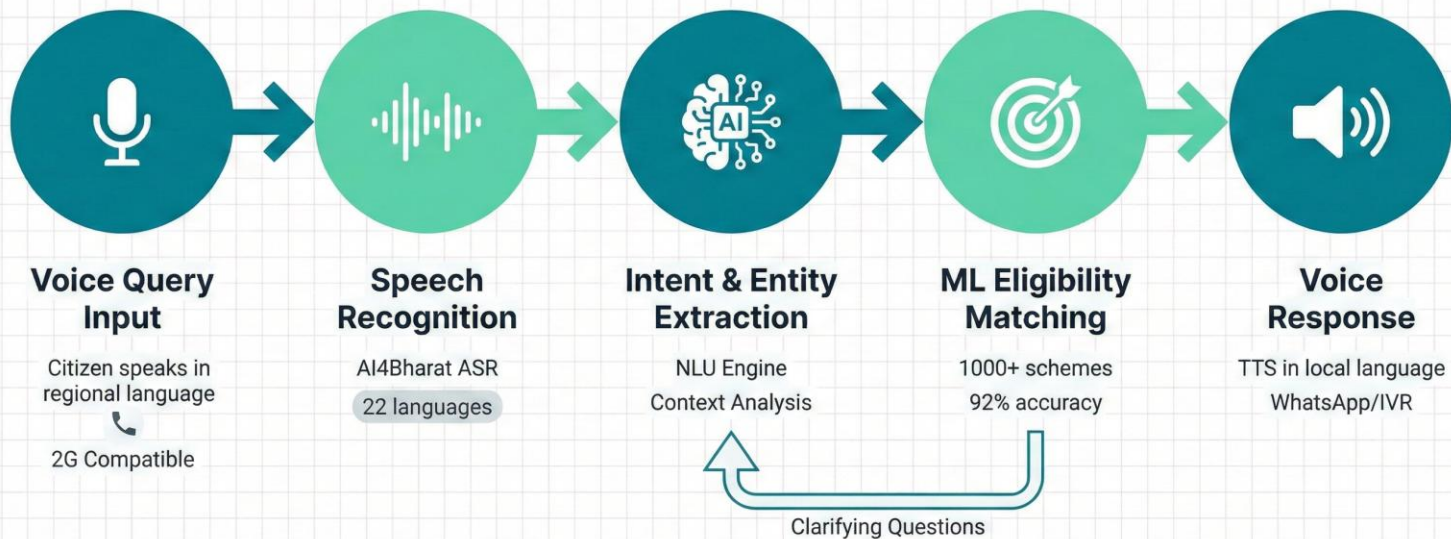


## Accessibility

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

## Process Flow: User Journey

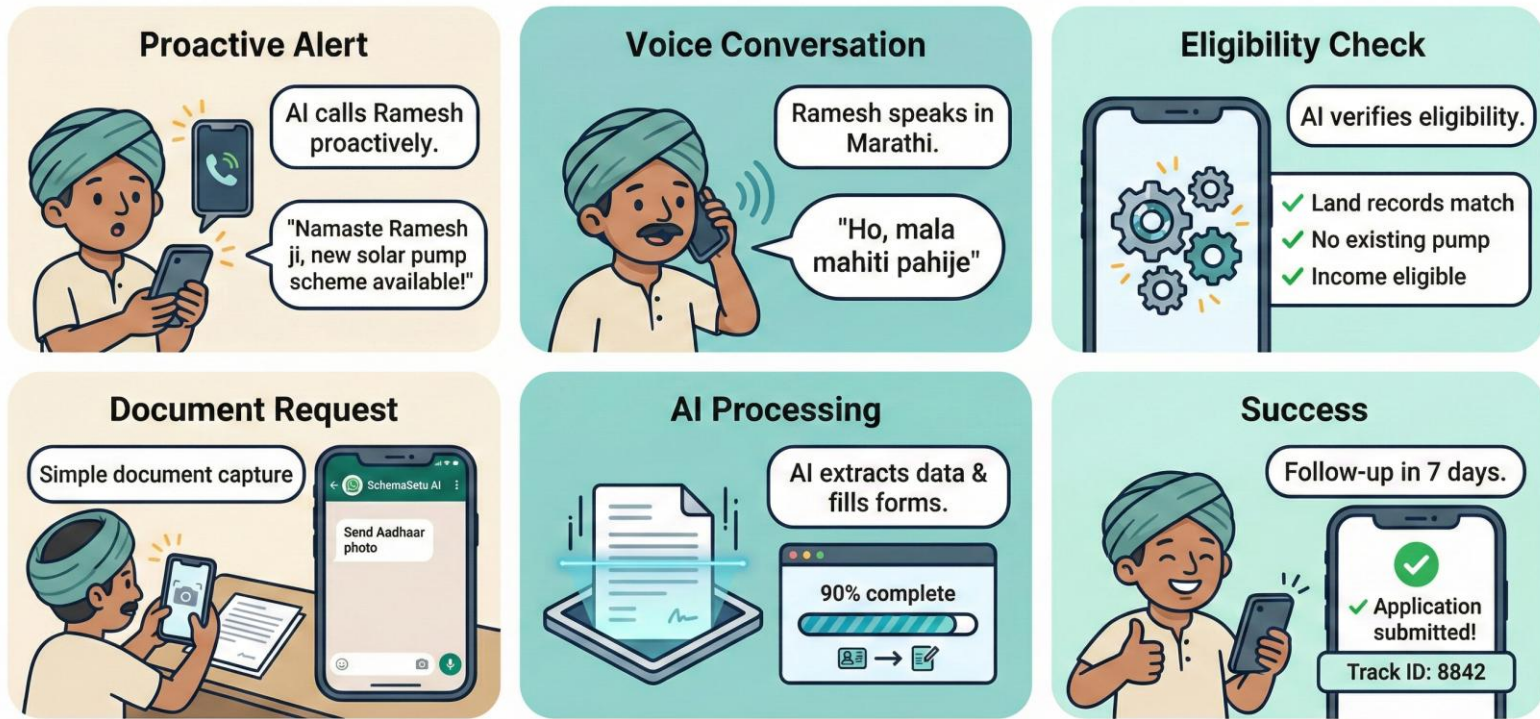
### SchemaSetu Process Flow - Voice-First Government Scheme Discovery



2G Compatible • 500KB per query • 24/7 Available

## Use Case: Farmer Scenario

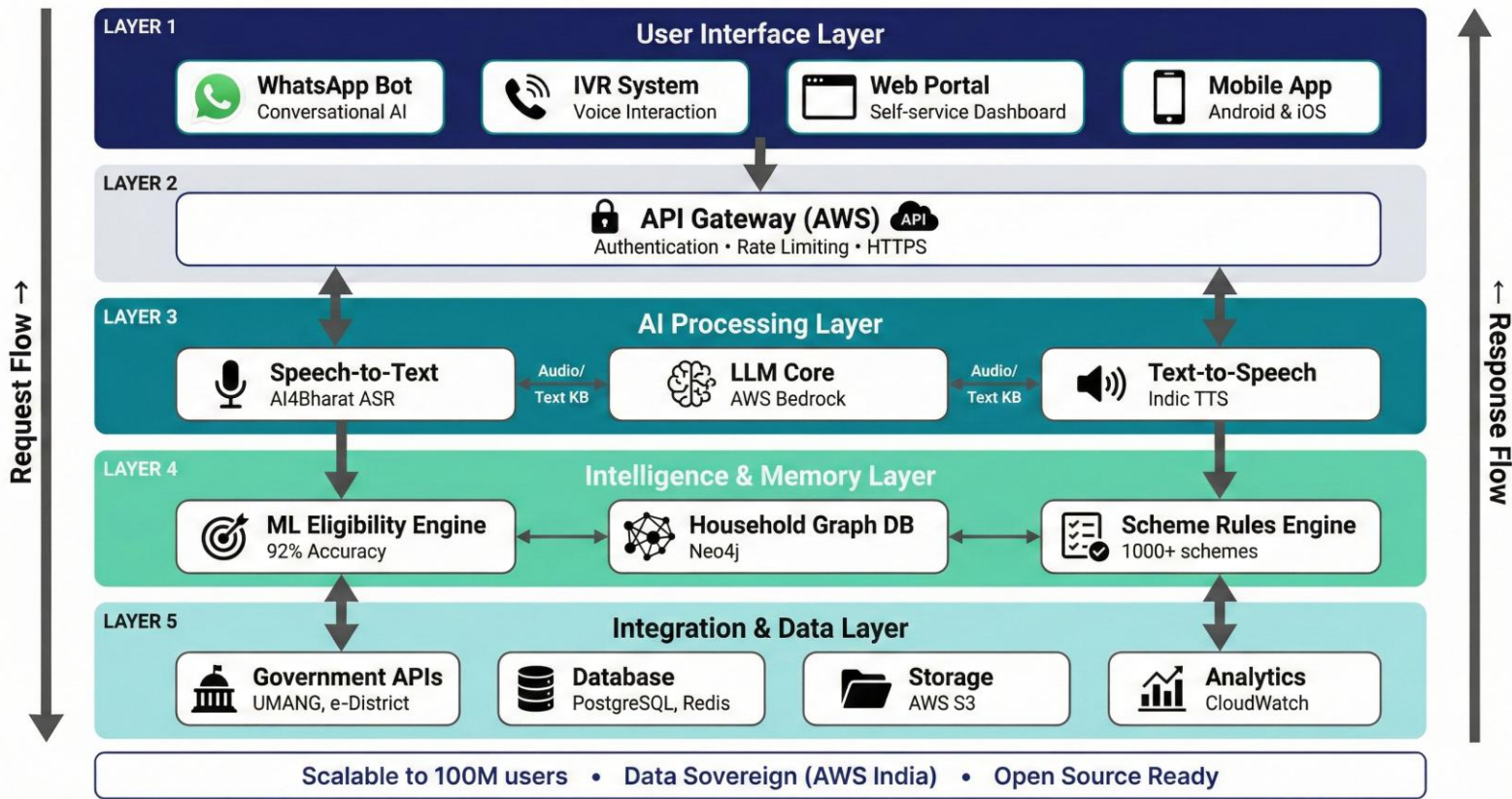
### Real-World Use Case: Farmer Ramesh discovers PM-KUSUM Solar Pump Scheme



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 **I12S**  
HACKZESTLE

Media partner **YOURSTORY**

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Thank You

