

Agentic AI Integration (Summary)

1. Overview

We extend the farmers' bookkeeping chatbot with agentic AI and add call center automation. The AI ensures data quality, generates insights, and automates follow-ups or calls when needed.

2. Chatbot Integration

- **Validation Agent:** Checks for missing fields and asks clarifying questions.
- **Categorization Agent:** Classifies entries (fertilizer, labor, sale, etc.).
- **Anomaly Detection:** Flags unusual data and asks confirmation.
- **Reminders & Summaries:** Sends daily prompts and weekly insights.

Workflow: Farmer answers → AI validates → clarifies/categorizes → moves to next question or summary.

3. Call Center Integration

- Triggered by alerts (missing data, anomalies).
- **Agents prepare script** with farmer history and clarifications.
- **TTS converts script to voice;** call placed via Twilio/other.
- **Responses transcribed and parsed,** then saved.
- Used for automation or as support material for human agents.

4. Development Specs

- **Minimal:** i7/Ryzen 7, 32 GB RAM, RTX 3060/4060 GPU (cloud APIs).
- **Recommended:** i9/Ryzen 9, 32 GB RAM, RTX 3060/4060 GPU (local models).
- **Cloud Option:** Use OpenAI/Anthropic, managed TTS/ASR, small VM for orchestration.

5. Timeline (6 Weeks)

1. Setup & chatbot baseline
2. Validation + categorization
3. Memory retrieval
4. Anomaly detection + reminders
5. Summaries
6. Call center pipeline (script + TTS + calls)

6. Deliverables

- Chatbot demo with AI validation
- Call center demo with script + TTS
- Logs & system diagram
- Evaluation metrics (accuracy, completeness, anomaly detection)