

# Agritech AI Government Scheme Discovery Platform

## MVP Prototype Development Guide

### 1. Objective

Build a Minimum Viable Product (MVP) that helps farmers discover government schemes based on their profile using AI-based recommendation logic.

### 2. MVP Core Features

- Farmer Profile Creation (state, land size, income, crop)
- Scheme Database (10–20 government schemes)
- Recommendation Engine (eligibility + scoring logic)
- Explainable AI (show eligibility reasons)
- Recommendation UI
- Basic chatbot (optional)
- Document upload (optional)

### 3. System Architecture

Frontend: React.js

Backend: Firebase (Firestore)

Database: Scheme JSON or Firestore

Recommendation Engine: JavaScript or Python

Hosting: Vercel

### 4. Database Schema

User Profile:

- name
- state
- land\_size
- crop
- income

Scheme:

- name
- eligibility\_conditions

- benefit\_amount
- supported\_states

## 5. Recommendation Algorithm

Step 1: Load user profile

Step 2: Compare profile with scheme eligibility

Step 3: Assign eligibility score

Step 4: Sort schemes by score

Step 5: Return top schemes with explanation

## 6. Frontend Components

- Profile Form
- Recommendation Page
- Scheme Detail Modal
- Chatbot Interface (optional)

## 7. Backend Components

- Profile storage
- Scheme storage
- Recommendation API
- Application tracking

## 8. Development Timeline

Day 1: Create scheme dataset

Day 2: Build profile form

Day 3: Implement recommendation logic

Day 4: Display recommendations

Day 5: Integrate backend

## 9. Future Enhancements

- Machine Learning recommendation model
- OCR document verification
- Voice assistant
- Multilingual support

## 10. Portfolio Value

This project demonstrates:

- AI recommendation systems
- Full-stack development
- Real-world problem solving
- Government tech innovation