

PROJECT DESCRIPTION

GHSS Regional Youth Innovation Challenge 2026
Agritech Domain

Project Title

YCD Farmer Guide – AI-Powered Agricultural Support Platform

1. Project Overview

YCD Farmer Guide is a comprehensive mobile application that serves as a digital companion for smallholder farmers in Cameroon. The platform integrates artificial intelligence, e-commerce, expert advisory services, and community features into a single, user-friendly application accessible on basic Android smartphones.

Vision: To become the leading digital agricultural platform in Central Africa, empowering 1 million farmers with technology-driven solutions by 2030.

Mission: To bridge the gap between traditional farming practices and modern agricultural technology, enabling smallholder farmers to increase productivity, access fair markets, and build resilient livelihoods.

2. Detailed Feature Description

AI-Powered Disease Detection

- Farmers take a photo of the affected plant
- AI analyzes the image and provides instant diagnosis with confidence score
- Treatment recommendations and preventive measures in French and English

Agricultural Marketplace

- List and sell produce, seeds, fertilizers, and equipment
- Direct orders from buyers, real-time pricing, secure mobile payments
- Track sales and manage inventory

Expert Advisory System

- On-demand chat/video consultations with certified agronomists
- Appointment booking and pay-per-consultation model
- Farm visit requests for comprehensive assessment

Community Forums

- Peer-to-peer knowledge sharing and support
- Region-specific discussions and best practices

Weather Intelligence

- Hyperlocal 7-day forecasts with agricultural advisories
- Climate risk alerts for better planning

Technology Stack

- React Native (Expo), Node.js, PostgreSQL, Groq AI, Railway Cloud

3. Impact and Scalability

- **Target:** 50,000+ farmers in 10 regions
- **Crop loss reduction:** 30%
- **Income increase:** up to 2x
- **Sustainable business model:** freemium app, transaction fees, partnerships
- **SDG alignment:** No Poverty, Zero Hunger, Decent Work, Innovation

Contact:

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