Disease Diagnosis: Nuru for in-field Pest

Crop Care in Your Pocket: Nuru App, Your Farming Companion

PlantVillage Nuru is an innovative smartphone app that uses artificial intelligence for offline diagnosis of crop damage by diseases and pests. It offers instant diagnoses and guidance on disease and pest control, empowering farmers to enhance agricultural productivity and food security.

Penn State University
David Hughes

This technology is TAAT1 validated.

8·8 Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment 4

Climate impact 7

Problem

- Farmers often struggle to identify crop damage caused by diseases and pests, which can lead to reduced crop yields and economic losses.
- Many farmers lack access to expert advice and information on how to manage and control crop diseases and pests effectively.
- Language barriers can make it challenging for farmers to access relevant information and guidance on crop protection.

Solution

- PlantVillage Nuru offers instant offline diagnosis of crop damage symptoms caused by diseases and pests using artificial intelligence and machine learning.
- The app connects users to a network of nearby users and provides information on how to control the identified diseases and pests, offering expert advice and solutions.
- The app is available in multiple languages, making it accessible to a wider range of users and overcoming language barriers.
- The app employs machine learning and object recognition, allowing it to continuously improve and enhance its accuracy in diagnosing crop issues.

Key points to design your project

PlantVillage Nuru is a smartphone app using AI for offline crop damage diagnosis. It provides instant diagnoses and pest management guidance, aiding farmers in improving productivity and food security. To integrate it into a project:

- Raise awareness and provide training to farmers and extension officers.
- Build local capacity for technology use.
- Promote the app through various channels.
- Collaborate with relevant stakeholders.
- Use the app freely.
- It synergizes with SeedTracker for seed registration and certification, expanding its impact beyond Nigeria and Tanzania.

IP

Open source / open access

Technology from

ProPAS

Commodities

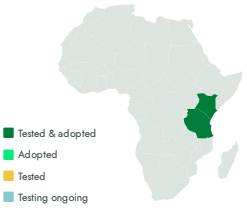
Maize, Cassava, Other root/tuber

Sustainable Development Goals

Categories

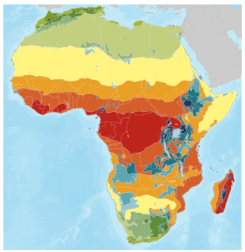
Production, Digital applications,
Advisory and information service

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Farmers