

Smart India Hackathon 2020

Organization: **Govt. of Bihar (DOA)**

College Code: **1-3515253975**

Problem Statement: **PK414- Developing an e-enabled real time produce life cycle monitoring & sharing mechanism to enhance output realization to farmers through private sector participation and DBT**

Team: **ASHWATTHAMA**

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The Problem

Presently, farmers **do not have direct access to the knowledge** of weather and geographical conditions that may affect their crop.

Being **unable to buy quality seeds, better tools**, suitable fertilizers and effective pesticides also results in poor harvest.

Lack of mechanisation causes hard work with lower benefits.

They are **uninformed about the prices** of exchanges, storage and transport which leads them to malicious transactions (read cheating). All of these affect the harvest and subsequently the profit which results in unpaid debts and consequently suicides.

The Solution

Marketplace

Communicate with **Farmers, Traders, Experts, Doctors, Buy and sell Crops, Seeds, Tools, Chemicals**, get **Loans, Predictions** and get **services** like **medicine, machines** and **tractors**.

Assistant

Automate, Schedule and **Monitor** farm **Activities, Temperature, Pressure, Moisture**, get **Predictions** based on **Location, Weather**, State of farm, Market for better Harvest and Profit, Identify and get Treatment for Diseases along with **encyclopedia**, all in your **language**.



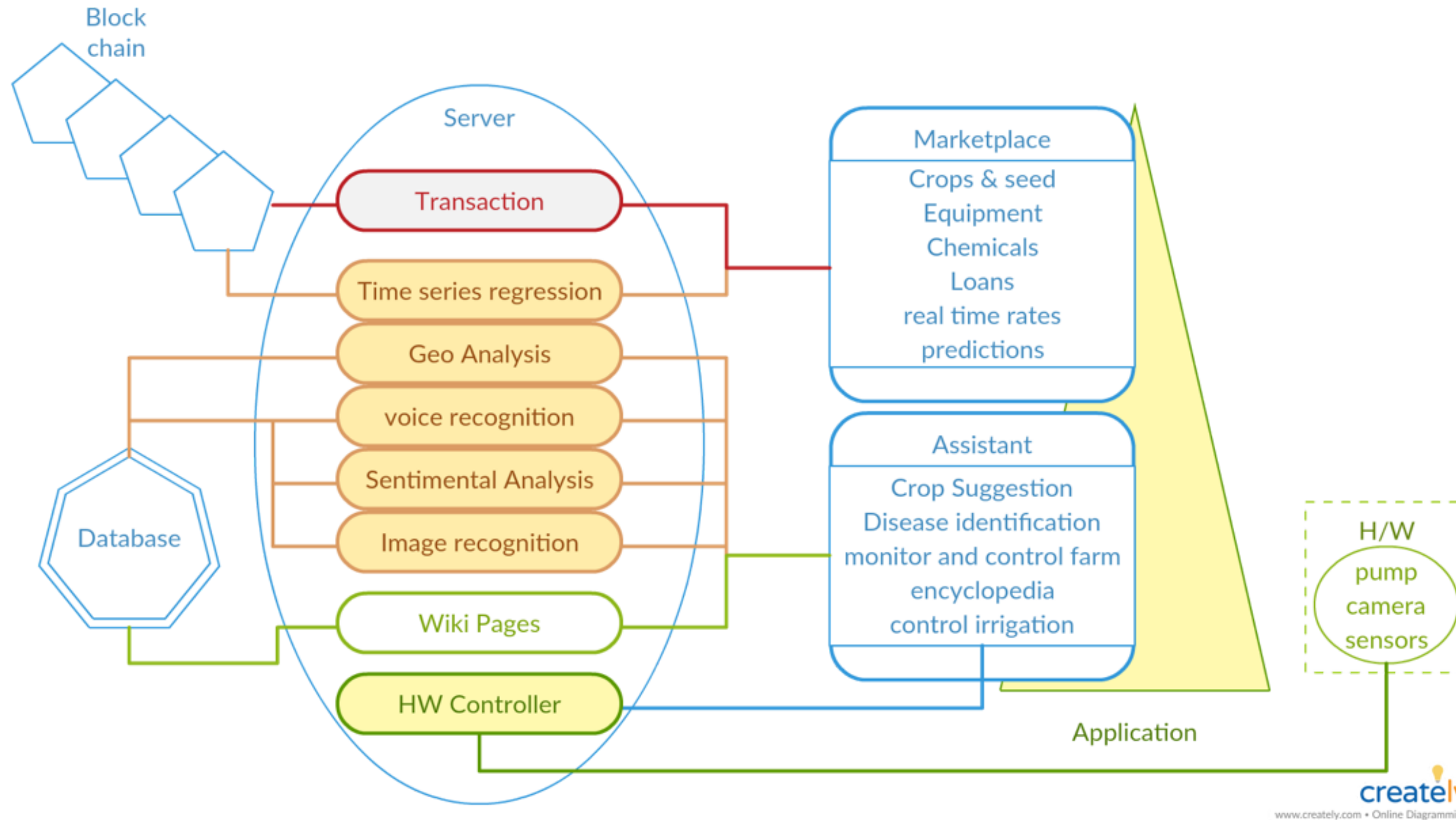
PROJECT FLORA

A friendly assistant for all agricultural needs.

Use Cases

User	Identify Crop Diseases with AI	Personal Info about others	Encyclopedia	Forum for Talk	Manage Farm Status and Activities	Help and Support	Document Storage	Market Buy and Sell	Govt. Sponsored Schemes	Loans
Farmer	Yes	View	View	Yes	Yes	Get	View and Upload	Yes	View	Get
Trader	Yes	View	View	Yes	No	Provide	View and Upload	Yes	View	Give
Expert/ Admin	Yes	View	View and Edit	Yes	View	Provide	View	Yes	View	Monitor
Doctor/ Vet	Yes	View	View and Edit	Yes	-	Provide	View	Yes	View	-

Architecture



Special Features

- Farmer can share crop state and crop cycle
- Crop Yield Prediction
- Maintain record of all activities
- Apply and avail government schemes and benefits
- Location and weather based crop planting and treatment prediction
- Fertilizer and Insecticide advisory
- AI and AR Based Disease Identification
- Remote control of activities like watering
- Monitoring using sensors and cameras
- Spend Management with Shop and Bank
- Multilingual and Cross-platform



Tech Stack

Expo/React Native

Artyom.js

Ethereum

Express/NodeJS

MongoDB

Tensorflow

Synaptic

Chart.js

Msg91

Paytm and UPI

OWM, Leaflet, Cesium

Dependencies

Low congestion communication network

Good internet connectivity

Access to mobile device

