

# SIH- 2020

- **ORGANISATION** : CDK GLOBAL
- **PROBLEM STATEMENT** : Portal for Farmers to sell the produce at a better rate
- **PROBLEM CODE**: RA27
- **TEAM NAME** : HACKING BAD
- **TEAM LEADER NAME** : ARSH GOYAL
- **COLLEGE CODE** : U-0374

## Problem Statement Description :

- System that provides farmers an interface to sell their produce, and connect with the buyers all over India
- Simple interface that works on mobile, SMS to upload produce details and respond via phone and SMS (taking care of digital divide)
- Interface for anyone to buy the produce/vegetable – initially visit the place and buy or have courier service integrated to deliver the vegetables .
- Technology that can be used as a platform for connecting car buyer to Seller
- Farmers can get a better price for their produce, no additional cost spent in marketing and delivery of goods, however they can choose to charge more by delivering the items themselves



## Daily Marketplace:

Daily Market for **Perishable goods**:

1. Established in early morning hours **(5-8 a.m.)** by farmers.
2. After that **bidding portal** will open and buyers can bid for the crop unanimously.
3. After bidding time is up **(1 p.m.)** farmer can select the buyer among top bidders.
4. Orders will be acknowledged from both side and will to be delivered by next day.

## Crop Recommendation Section:

1. Farmer Decision Support Model based upon user's Location based Weather and previous Sales dataset.
2. It would suggest farmer which crop's he should grow during which part of year based upon his location,
  - Weather and
  - Location based sales of the crops on the portal.

## Solution:



**SMS service**

**Publish crops** from their verified mobile number.

**New bid** SMS with details about bid and its Unique Reference no.

**Select bid** via **SMS** by bid's reference no.

**Acknowledgement SMS** with complete details about pickup and payment.



**Farmer**

A **Web and App** easy to use portal



**Icon and Text** based Simple **Multilingual** Platform.

**Publish their crops**

with complete details like :

- Select **Crop** and **Category** from a large list of all general crops and categories .
- Quantity and Expected Price
- Quality Certifications : **Certified Organic, Verified by .**

**Modify Crops**

based upon local sales.

**Deliver themselves**

or use courier service



**New Bid?**

**Notifications/SMS**

Notifications and SMS of latest Bids on the crops.

**Evaluate Bids**

Accept or Reject a Bid on crop .

**Message Buyer**

using chat service to Negotiate price etc..

**Acknowledgement**

After order is Confirmed from buyer pickup, payment etc. details are sent to farmer.



**Buyer**

A **Web and App** portal

**Register/Login**

**Search, Filter and Sort** the crops on basis of:

- Location ➤ Quality
- Farmer's Rating
- Price

**Bid**

on crops with their offered price.

**Delivery**

on desired address or pickup from farm.

**Suggestions**

Based upon previous purchases, business type etc.

**Direct Payment**

through UPI/payment portal to farmers.

**Question/Answer** to farmers.

**Cart and Favorites**

**Confirmation**

of order after bid is accepted .



## Stubble/Husk Section:

1. Special Section for Stubble(Farming Waste) selling to Industries/Bio-organic/ Electric Power plants instead to burning in fields which will reduce pollution.
2. Additional Income for farmers and easy fuels for the industries.

## TECHNOLOGY STACK:

1. HTML5,CSS3

4. Django

7. Pandas

2. Bootstrap

5. Python

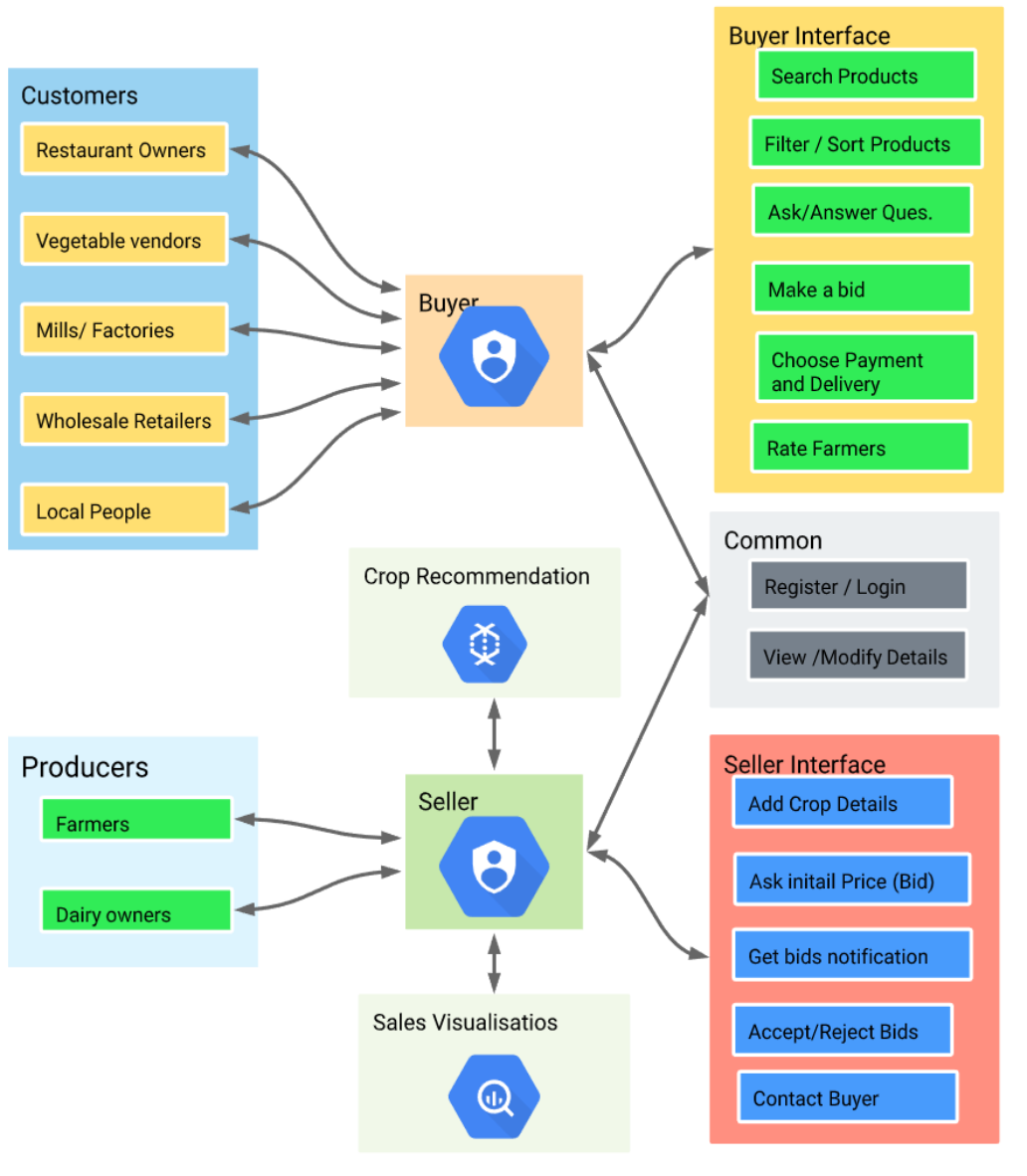
8. Machine Learning

3. PostgreSQL

6. NumPy

9. Android

# Use Cases :



# Salient Features :



## Visualizations:

- Simple ,easy to understand Visuals (graphs etc.) and their textual interpretations on region based: crop sales, prices offered, frequency of sales data to help farmers better understand sales dynamics of the region and decide selling price and crop to be grown.

## MSP:

- **Minimum Support Price** restriction and no crop will be sold for lower than it's MSP

## Help section

- Integrated Help section on each page containing Tutorial on **How to use** and **Walkthrough** of that feature so that farmers can easily use the portal .



**Easy Payment** directly to the farmer's bank account via integrated **UPI /Online payment portal** or **COD**.

**Buyer Homepage** will contain personalized suggestions based on his business requirements and previous activity on the portal to improve engagements.

**Daily Market** to replicate the traditional system of **Mandis** and supply chain to local vegetable vendors, restaurants etc. .

Direct **Chat Service** between farmers and buyers to interact and transparent working of the platform .

- Once the bid is accepted buyer has to confirm the order within a fixed time limit, after which farmer can move to and select another bid.

## Dependencies:

- **SMS Provider**
- **Secure Payment Gateway.**
- **Location Based Weather Dataset**
- **MSP (Minimum Support Price ) Data.**