

# CropAI

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Our farmers are well too behind in using technologies and advanced methodologies to grow the crops. Every year we see that the farmers are committing suicide due to the bad crop (various reasons), or bad rates for the crops and loan sharks so to avoid the suicide of farmers we have created Progressive Web Application (PWA) on Django which takes less memory plus all the data is stored in cloud so every data is stored and retrieved confidentiality, This Application will enable them to utilize the power of technology in their farming as it contains modules like :-

1. **Rainfall** : Average Monthly Prediction
2. **Loan Policies**: Finding Best Loan Policies for Farmer
3. **Temperature**: Average Temperature of today and current week
4. **Predict Crop**:Which crop is best to grow in current condition plus future conditions
5. **News** : Current News of Agriculture, Latest Policies For Farmer etc
6. **Fertilizer**:List of Fertilizer Manufacturers near to the farmer location
7. **Sell Here**:No Middlemen,direct farms to shops/buyers
8. **Plant Library**:Details of Crop
9. **Expert Chat**:Chat between the farmers or farmers and experts to reduce failure in crop
10. **Finance Handling**: Taking loans based on their Finance
11. **Help**:Features of Application,Help Tube(Video recommendation),Helpline No

## Getting Started

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These instructions will get you a copy of the project up and running on your local machine for development and testing purposes. See deployment for notes on how to deploy the project on a live system.

## Prerequisites

Python libraries to be installed:

1. **PWA module** : pip install django-pwa
2. **Numpy library** : pip install numpy
3. **Pandas library** : pip install pandas
4. **Scikit** :pip install -U scikit-learn
5. **Channels**: pip install django-channels
6. **Docker**: <https://docs.docker.com/compose/django/>
7. **Redis cli**: pip install django-redis
8. **Redis-channels**:pip install redis-channels

## Deployment

**To get the Django pwa running on localhost:**

```
python manage.py runserver
```

## Running the tests

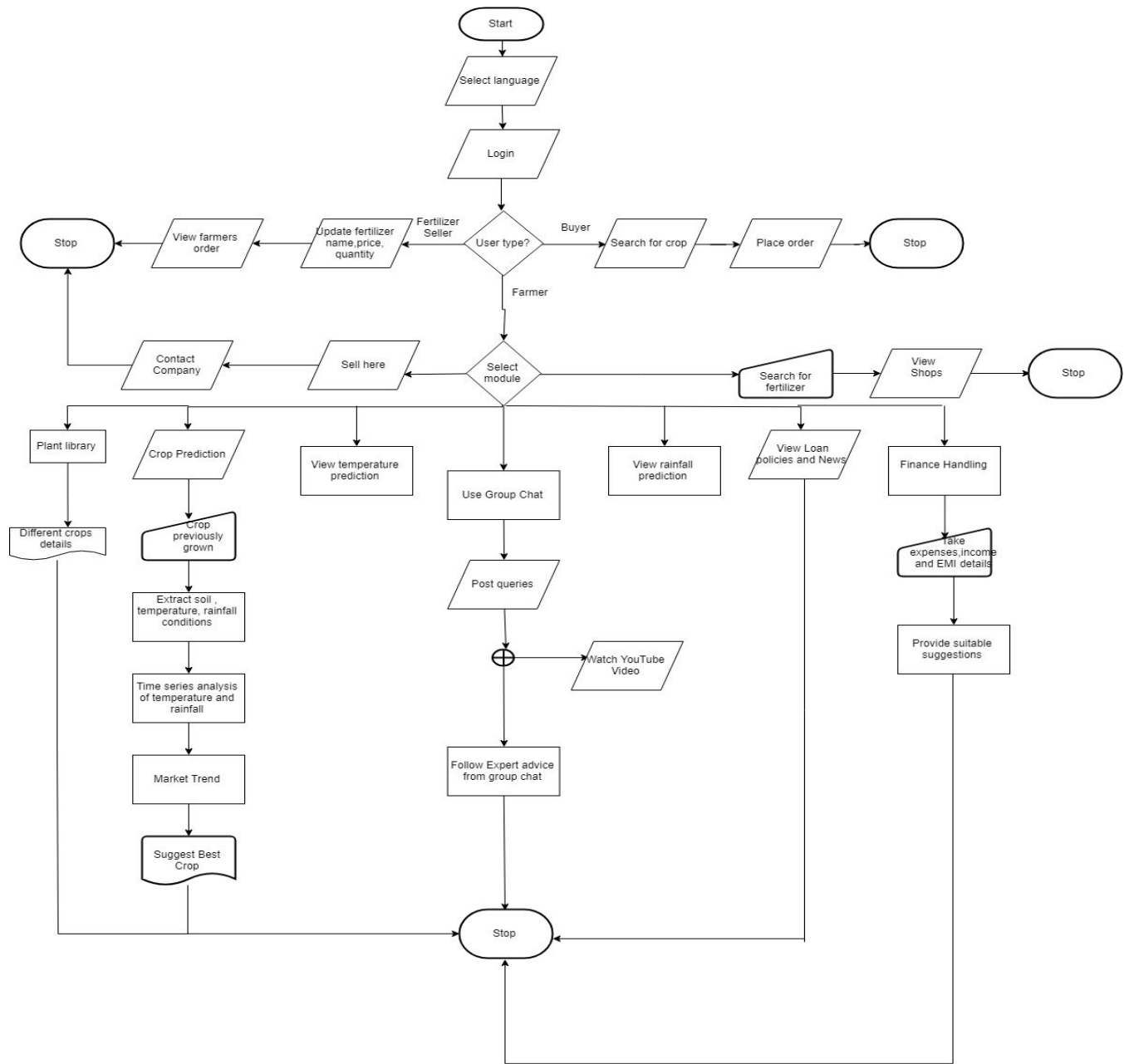
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- Register with us
- Select the type of customer :

**Farmer** : The pwa provides a number of features for the support of farmers. All the modules listed in the beginning are provided with the help of a simple interface. They can be tested according to preferences.

**Crop Buyer**: The crop buyer can view the crop productions of farmers and buy the produce by placing an order.

**Fertilizer Seller**: Fertilizer sellers can update the name of the fertilizer available for selling along with its price. The price entered for fertilizer by seller will be verified by the actual prices standardized by government on India.



## Features:

**Rainfall :** Average monthly prediction of rainfall for the next year based on the data available since 1901. We are using time series data analysis algorithm for predicting the future values.

**Loan Policies:** Finding Best Loan Policies for Farmer provided by the government as well as some of the trusted financial organizations.

**Temperature:** Average Temperature of today and current week using time series data analysis model.

**Predict Crop:** Which crop is best to grow in current condition plus future conditions and controlling the crop trend based on the prediction.

**News :** Current News of Agriculture and the Latest Policies For Farmer

**Fertilizer:**List of Fertilizer Manufacturers near to the farmer location.

**Sell Here:**The need for Middlemen to sell the crops is eliminated by this module .Direct farms to shops interaction is made possible.

**Plant Library:** Detailed description of the amount of rainfall,temperature and soil type required by the crops which helps the farmers to choose their Crops wisely.

**Expert Chat:**Chat between the farmers or farmers and experts to reduce failure in crop and discuss their common problems.

**Finance Handling:** Taking loans based on their Finance and maintaining a record of expenditure of farmers.

**Help:** Information regarding the usage of Application,HelpTube a Video recommendation based on farmer search and a helpline no.

## Developers

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