EXPLANATION OF THE PROJECT

Objective & System Parts

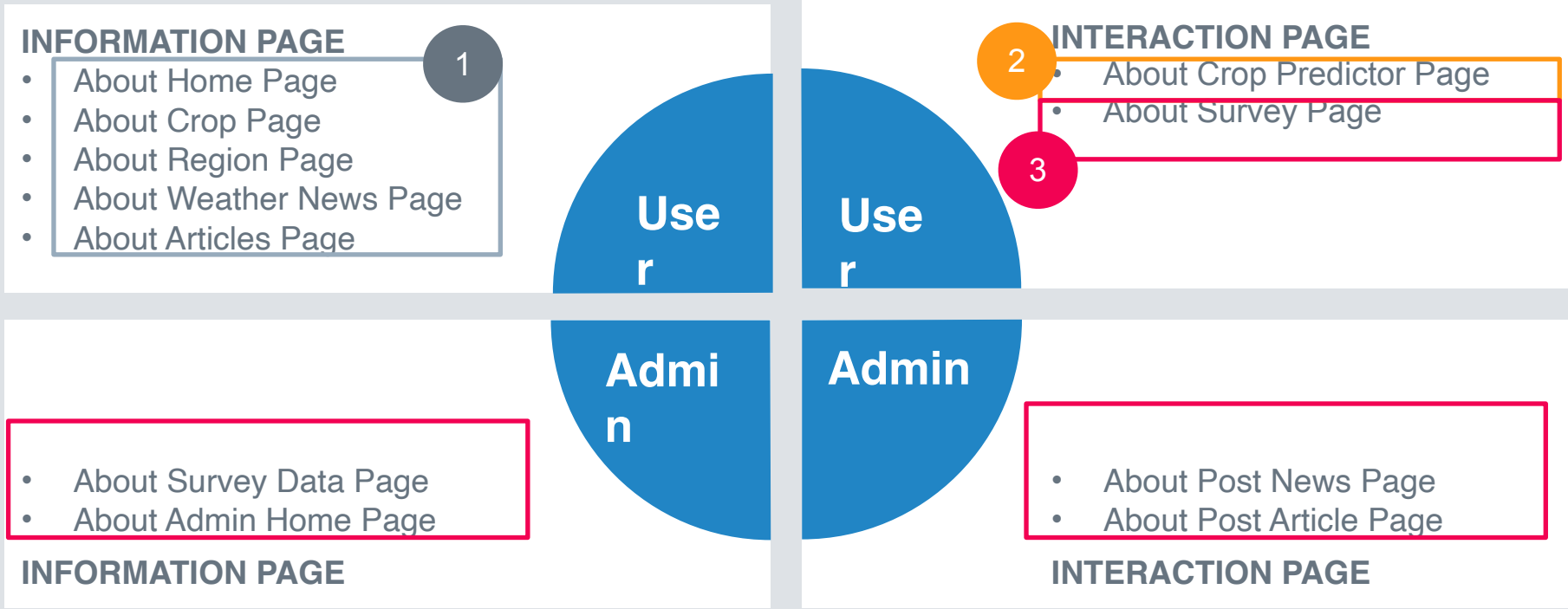
Goal & Objective

- To estimate the crop production rate based on the informative data
- To let people, know the nearly exact crop yield rate

System Implementation Parts

1. Layout Implementation
2. Algorithm Implementation
3. Database Implementation

System Sections of User & Admin (Web Page)



Layout Implementation

To design the layout of the pages

Language

- Python, HTML, CSS, JavaScript

Framework

- Bootstrap, Flask,

Code Editor

- Visual Studio Code

Database Implementation

To store the survey data put in survey page & display in survey data page of admin section

Database storage engine

- Sqlite3

ORM

- SqlAlchemy

Layout Implementation

Step 1: A crop dataset is stored.

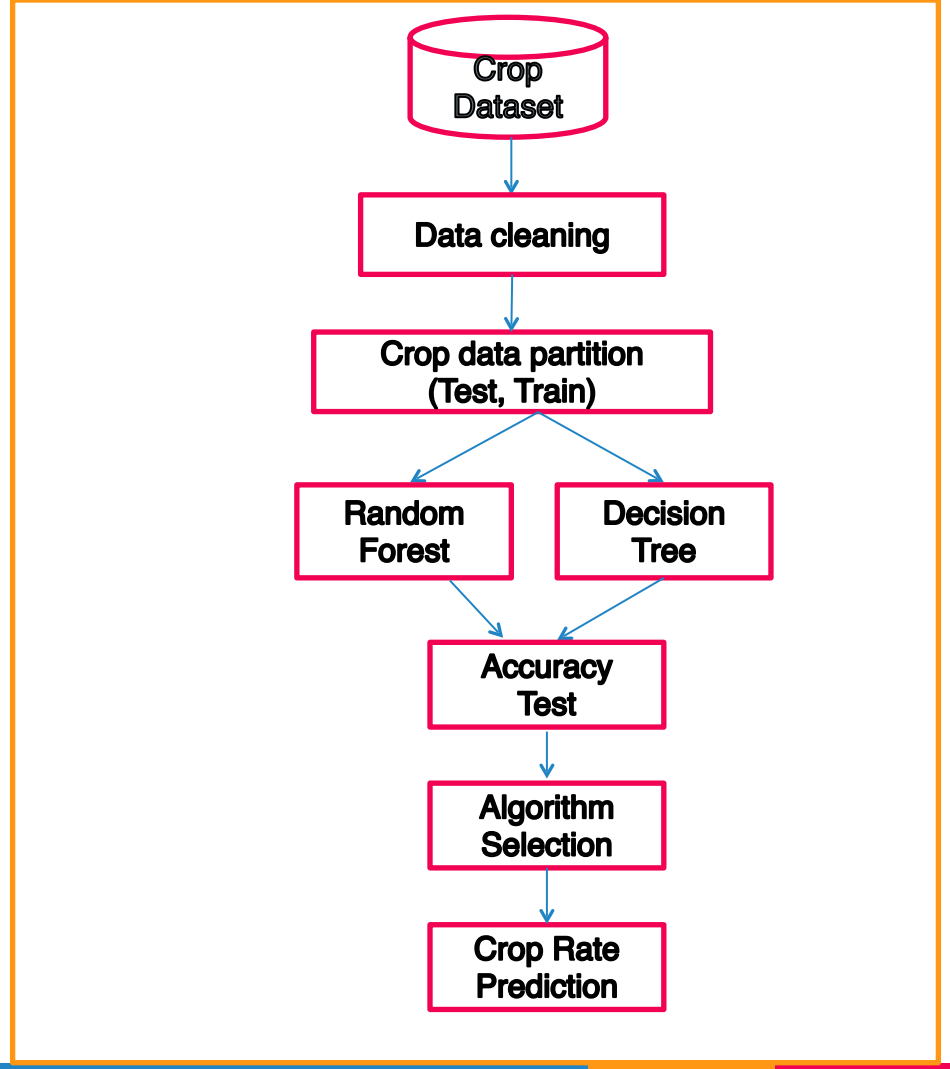
Step 2: Data cleaning functions such as noise removal, missing data fill up, or duplicates removal are executed.

Step 3: The cleaned dataset is partitioned into test and train dataset.

Step 4: The classification algorithms of decision tree and random forest is trained with data.

Step 5: The algorithm with better performance is selected (classifier evaluation & implementation)

Step 6: Crop rate is then predicted with the implementation of selective algorithm (algorithm with better performance) on dataset.



Results & Flaws

Results

Forecast crop yield rate per acre depending on crop types and location

Limited & Inaccurate Dataset

Flaws & Limitations

Contribution and Future Work

Contribution

With the intention of crop rate estimation, hopefully, the system offers the **hugely contribution to the agricultural society**, mainly the farmers who are working hard to provide the food to the people.

Future Work

In the future, **farming devices sensors can be deployed in farm to collect real-time data information** about current farm conditions, soil moisture, humidity, pH level, etc. These **sensors will be connected over the internet using internet of things** in order to make **less loss in cultivation** and **increase yield rate annually** and looking forward to gain more profit from agriculture.