Project Report

Object-Oriented Programming Using Java

(ECSE102L)

SMART AGRIGATOR

Bennett University

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Department of Computer Sciences & Information Technology

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ACKNOWLEDGEMENT

'' In the present world of competition there is a race of existence in which only those will get success who have the will to succeed…. '' **Project is like a bridge between practical and theoretical concept which teaches us how to implement these theoretical knowledge in practical life. First of all we all are feeling very much obliged towards our CSE department who understood our potential and gave such a beautiful project to work on which resulted in the gain of great knowledge in the basic concepts of java. We would like to thank Arpit sir and Vijaypal sir who took interest in our idea and encourage us to develop such an app. We all are highly indebted to them for providing proper guidance and support for completing this project irrespective of their busy schedule.**

We are also very much grateful towards our parents for constantly supporting and helping us in all ways and boosting our moral support a lot.

Thumbs up and cheers to each and every team member who actively took part in the competition of the project by sharing their valuable views and helped each and every one in successfully developing the app.

ABSTRACT

Farmers are the backbone of our society. They are the ones who provide us all the food that we eat. As a result, the entire population of the country depends upon farmers. Be it the smallest or the largest country, because of them only we are able to live on the planet. Thus Farmers are the most important people in the world. But nowadays the condition of farmers in India is critical. They invest a large amount of money in Farming and when they don't get the desired result THEY COMMIT SUICIDE .This Rate is Constantly Increasing and we are hearing suicide news of farmers every week or month. Moreover, farmers are all living a difficult life from past years. In this Modern era Of Science Where Technology is developing at a very high rate, all others Section Of Society are getting advantage from it but not the farmers. 90% of the farmers are unaware about all these technologies which are developed for them and are easily accessible to them which can really help them a lot in productive farming. We all know that before starting any job in the world we should have proper knowledge about it and should do a great research about it. But some small scale Farmers try farming without the basic knowledge about the crop, amount

of nutrients reqd, etc. by virtue of which their cultivation fails and they suffer a huge crop failure. In order to stop this deadly Issue we have developed such an app which will provide all reqd Basic information about Cultivation of the crop like (amount of water reqd, climatic condition, etc.) which the farmer can read and can start cropping. We have pre-defined all the basic requirements required for a productive cultivation of a crop. The Farmer Just have to select which crop he/she wants to cultivate and have to submit. Our app will Show him all the information about that crop which he/she can follow. As we Know Mostly The Farmers are Unaware about all these available facilities to them So Our motive for developing this app was just to keep them update them and keep them aware about all those developing technology. This app can help them to understand how vital role do technology play in their life and how they can utilize it to the fullest. This will help to connect the Agricultural ecosystem with the Digital world.

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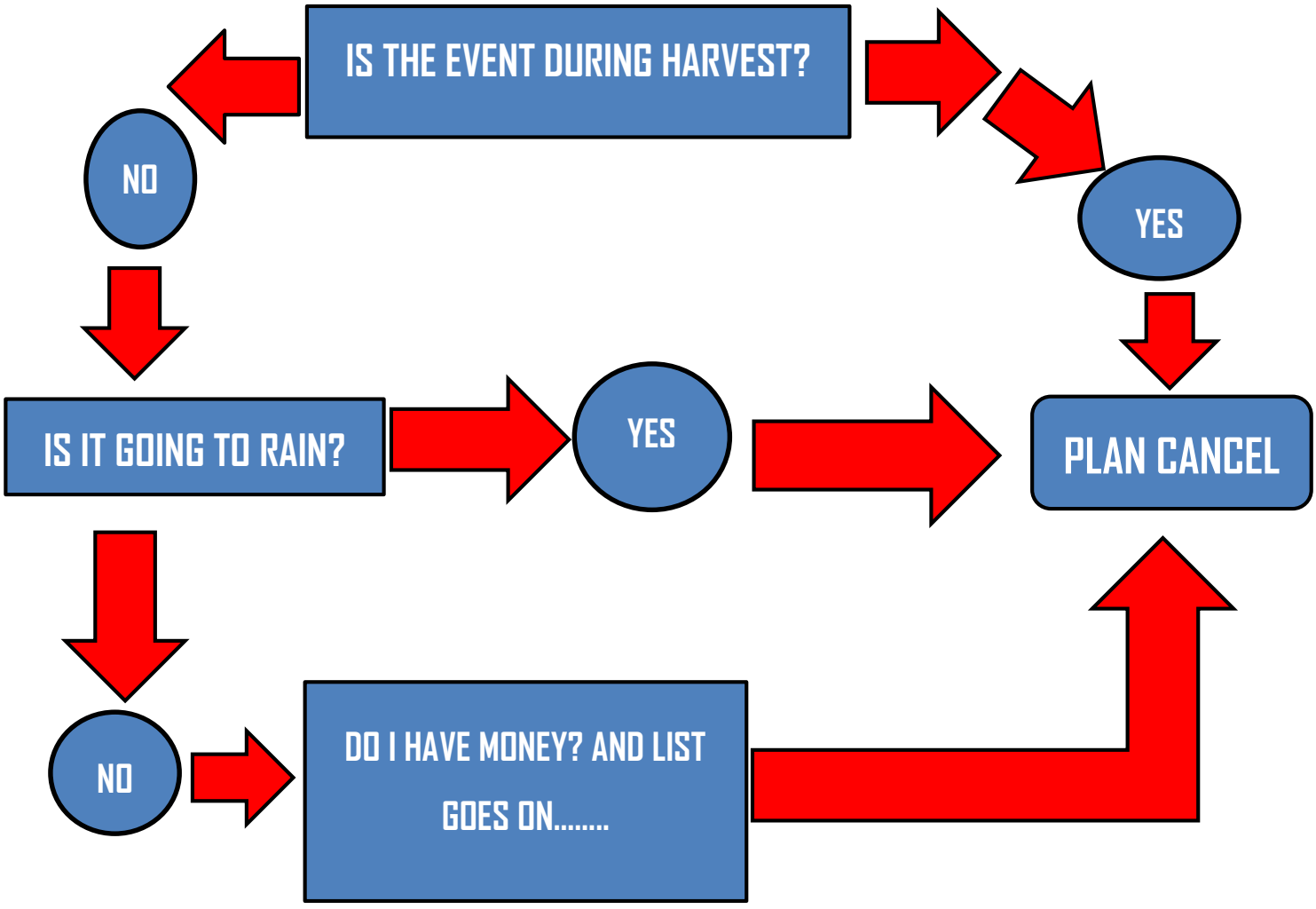
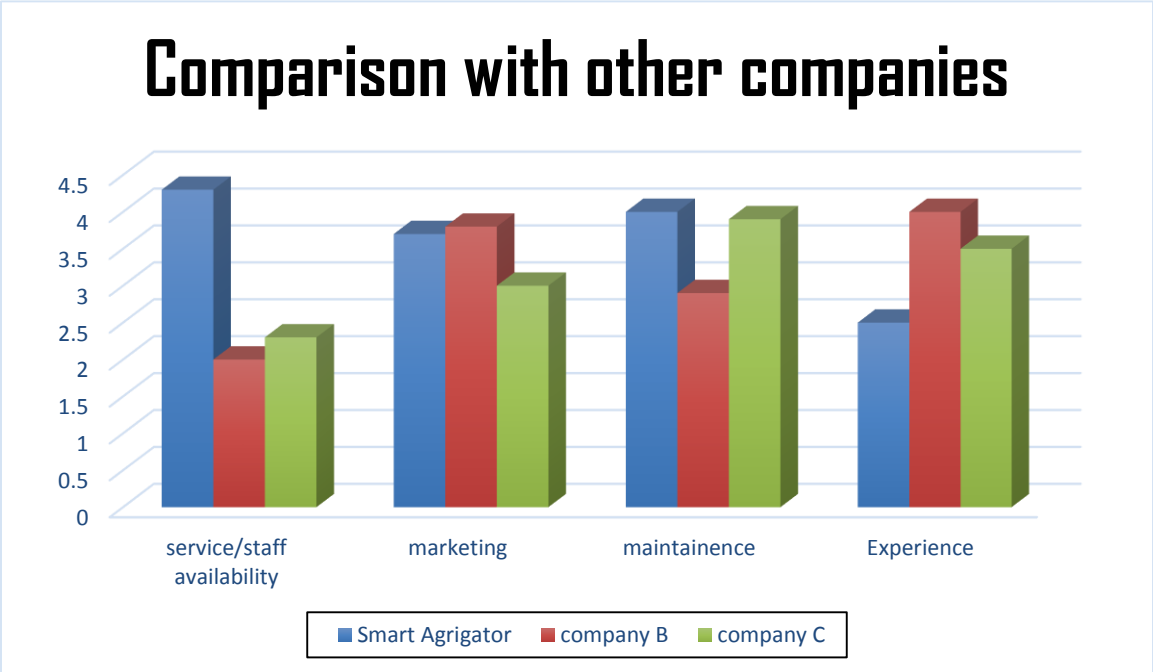
LIFECYCLE OF A FARMER




Comparison with other companies
4.5
4
3.5
3
2.5
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0.5
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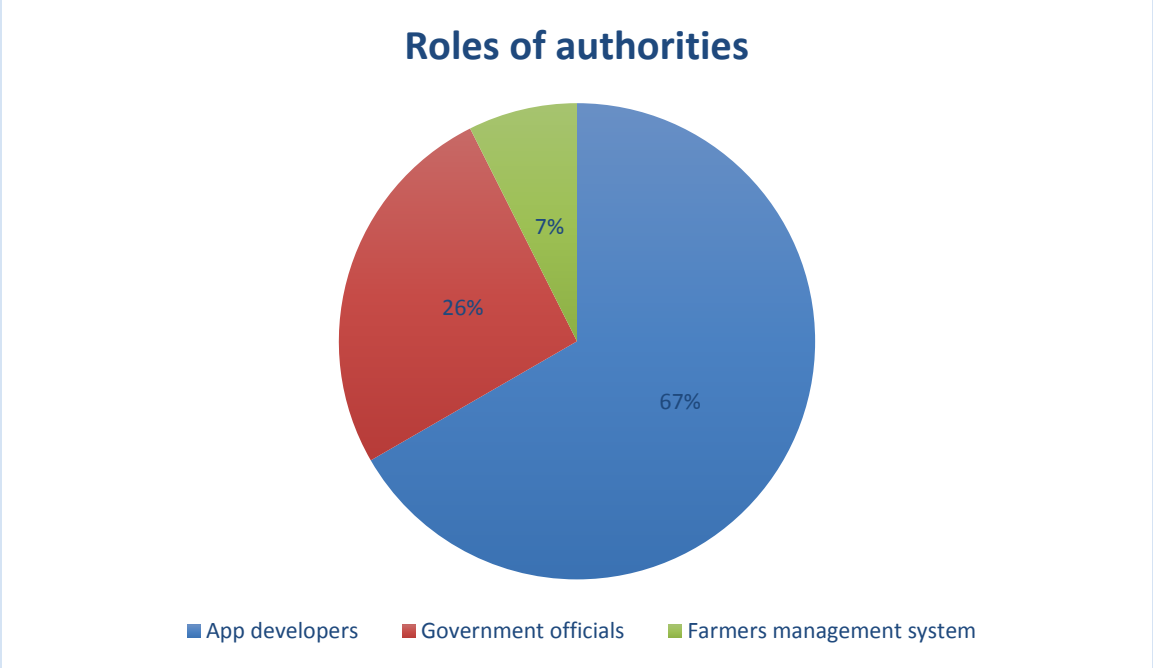
service/staff availability
marketing
maintainence
Experience
Smart Agrigator
company B
company C


Roles of authorities
7%
26%
67%
App developers
Government officials
Farmers management system

1 Introduction

Farmers are an important part of the survival of our various societies because they provide Food and Fiber. Farming and Agriculture are Two Trade which was born with Civilization and will never lose its Significance. From the inception of the human race, we depend on agriculture and farming to produce our foods, still, now we do. With The Evolution Of Science Farming methodology has also evolved a lot. And Throughout history, scientific and technological advances have greatly impacted the agriculture industry. With The Advancement of Technology, Nowadays Farmers are getting Great Benefit from Different Apps, Websites Developed for them. So Our Proposed Project is also based on The Welfare of these Poor Farmers. Our Main Motive behind Developing this Project was to provide all the Basic Information required For Cultivating a Crop.

1.1 PROBLEM STATEMENT

Majority of Small and Medium sized farmers in India are directly dependent on the crop yield. Theirs Only Source of Income is Farming and after fully cultivation of the crop they sell Their Produce in The market. But Crop Failure Is One of a Huge Problem India is suffering with. And These Failures Result in Very Severe Outcomes for the Farmers Especially Those Farmers Who Were Just Starting Farming After taking Huge Loans from Banks. The Most Basic Reason Resulting This Situation Apart From Weather condition Is Lack of Knowledge about Agriculture and Lack of Awareness about Technology Advancement. Due To Which Farmer Suicidal rate In India is Constantly Increasing.

1.2 Objectives

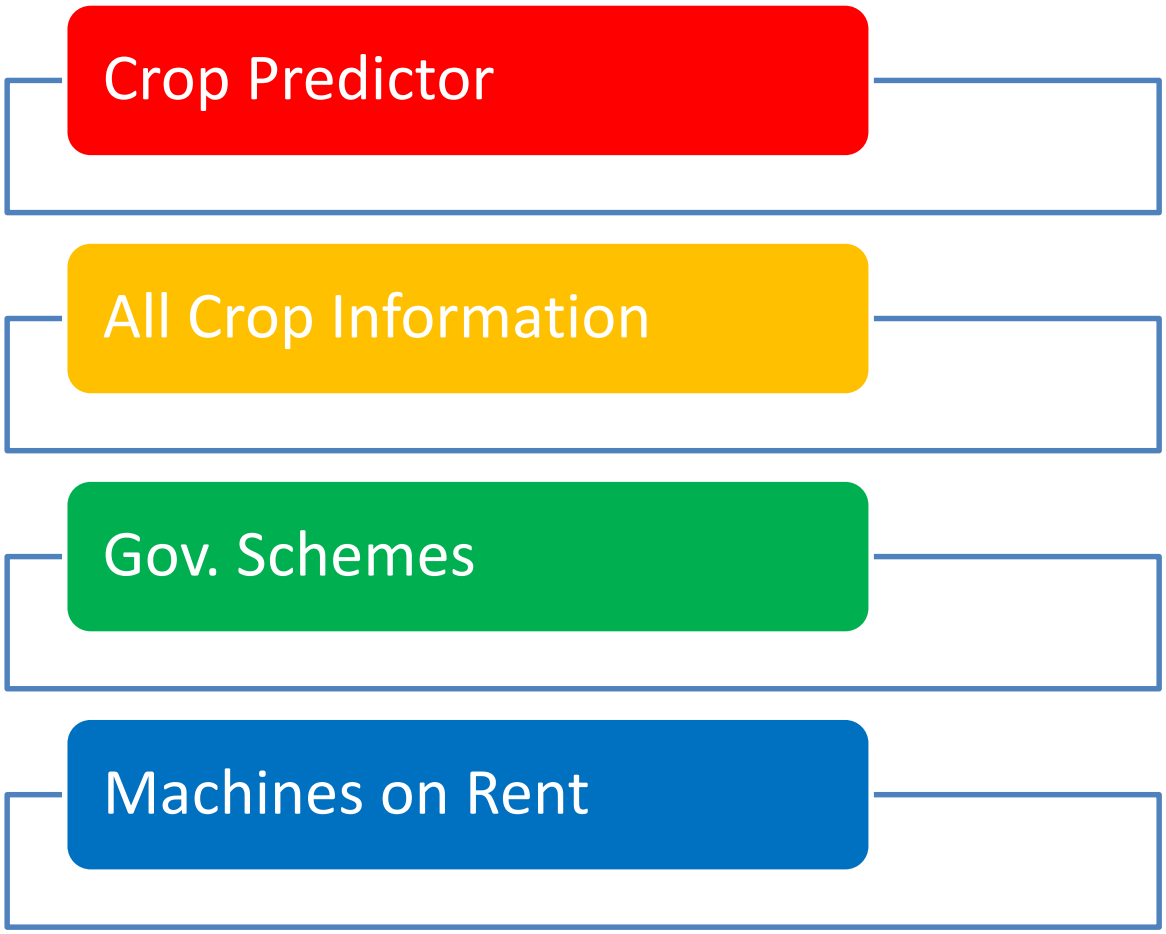
One Question which we all had before developing this app was that How our App can be used for a Social Welfare like Helping Those Section of Society which is Too far From Technology and don't have any Idea regarding the available facilities for them that is they are completely unaware about the role of digital world in their works. So keeping These Questions in our mind We Thought of Developing such a app For Farmers which can help them by Provide all the required information about a Crop, about Machineries, etc.We wanted That These Small Scale Farmers should understand the interrelation between Yields with Agricultural Parameters through technology. Our Objective was to reduce the Gap between farmers and digital World and they should also know how much benefits they can get after using our app.We Decided to anyhow make them completely aware about these all technologies available for them. This app will help To Connect the Agricultural and Farming practices with the Digital World.

1.3 IMPORTANCE AND NEED OF OUR PROJECT

Agriculture is basis for Human Civilisation.So we don't want any type of loss in the Agricultural Field Especially with the Farmer. The Farmer should start the proper Farming practice only after knowing all the basic requirements required for the crop and all the basic Knowledge on the use of agro-technology and input, skills on modern agronomic practices because the main reason for crop failure is the over or under use of components required in farming and lack of knowledge regarding cultivation practice.For Example if the temperature required for XYZ crop For best Cultivation is between 10-25 degree Celsius and we start farming it at a very high temp , Then It's obvious that the crop will get failed . That's Why

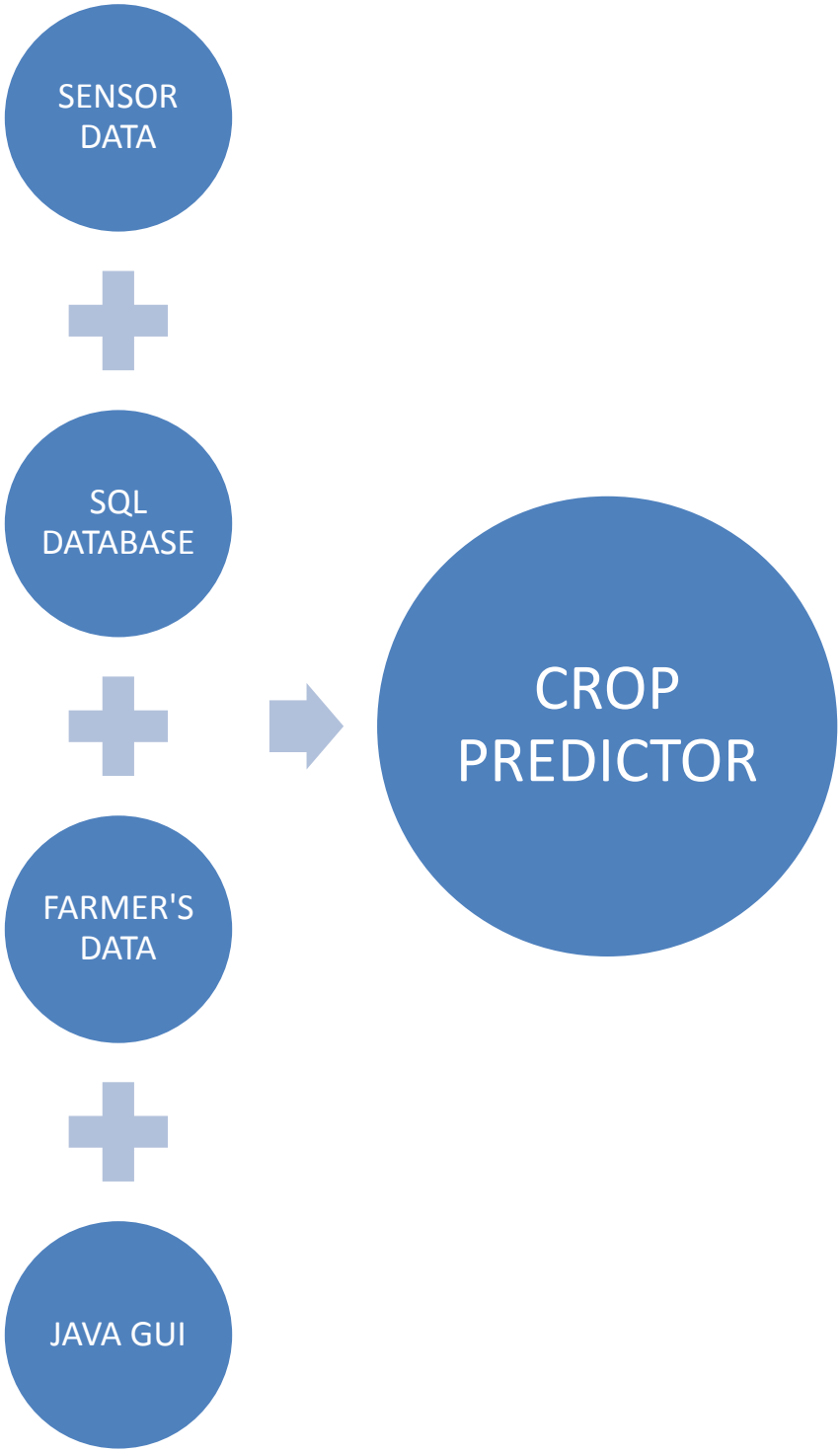
Proper use of available resource is very important in Farming. So we emphasize on providing all Basic Knowledge about farming Practices, machineries, etc. because any decision to carry out agricultural practices must be supported by knowledge and skills. Governments can take a number of different roles in supporting the Farmers and Supporting Them in all The way they need. We are also linking our web app to many Govt Sites So That Govt can also track records of the farmers and can help them in marketing their produces.If He/She Require any help from The Government then they can easily contact with them through the app

1.4 FEATURES OF OUR PROJECT



1.1.1 Proposed Solution/Approach/Technique

Proposed Methodology



2 Project Execution

2.1 Project Setup

SOME BASIC SOFTWARES WHICH WERE REQUIRED FOR DEVELOPING THIS APP WERE AS FOLLOWS :-

#	Decision Description
1	BASIC FRONTEND DESIGNING IN APACHE NETBEANS USING JAVA SWING
2	BACKEND CODING ALSO DONE IN APACHE NETBEANS
3	DATABASE CONNECTIVITY USING SQL
4	

2.2 Results and discussion

Due to Productive farming The Efficiency in Farming Increased a lot. Each Acre of Land was Perfectly Cultivated with the Right Amount of Seed, Water and Other Required Nutrients Needed for it. Our App is Completely Based on Organic Farming. We are not at all encouraging The Use of Fertilizers and Other Chemicals Because Though it Increases the Fertility of the Soil but it affects the quality Of the Crop. Due To This the Agricultural Ecosystem has been purified and has been improved a lot…

Conclusion and Future Work

Farmers are an important part of the survival of our various societies because they provide Food and Fiber that nourishes and cloths us. They have the ability to deal with varied growing seasons, climatic variations, soil conditions, and the often harsh catastrophic events of wildfire, drought, and floods. In some areas farmers are very specialized however in Undeveloped Area Farmers are Not So Experienced and have much Knowledge regarding Farming. They try their level best to do as much they can do But Ultimately get failed which results in serious outcomes. We should help them by making Them Aware regarding different Technologies available for them which they can access easily to increase the productivity in Farming. These Technology are really a game changer for them in terms of Yield Improvement. So its Our Role is to minimize the Gap between Farmers and Technology.

Now Talking About the Future Scope Of Our Project We will try to add The Feature of Drone which can Spot weeds and other deadly Insects which are harmful for the crops and will try to remove them. We are also planning to improvise the GUI So that the App looks More Realistic and Professional. We have only developed this app for PC users so In Future We will Also Develop This for Mobile Users. In Future it will be Released In Google Play Store and also in IOS store. We Will Also try to put some Inbuilt Gestures to it.

3 Major Contributions

- **SAHIL CHUTANI**–HANDLED THE BACKEND CODING PART OF PROJECT RANGING FROM LOGIN PAGE TO MACHINERY PAGE AND FROM CROP PREDICTOR PAGE TO THE ABOUT US PAGE**.**
- **RUDRANSH KUSH –**DESIGN AND APPEARANCE OF THE PROJECT THAT IS THE FRONTEND PART WAS HANDLED. STARTING FROM LOGIN TO ABOUT US PAGE AND ALSO HELPED IN SORTING OUT THE BASIC LAYOUT OF THE PROJECT.
- **SHUBHAM GAUTAM** –GAVE CONTRIBUTION BY HANDLING THE FRONTEND PART FROM MACHINERY TO GOVT LINKING PAGE AND SHARED VALUABLE IDEAS TO IMPROVE IT. HE ALSO HAVE PREPARED THE POSTER OF OUR PROJECT**.**
- **SAI SUVAM PATNAIK –**PREPARING THE REPORT BY DESCRIBING EACH AND EVERY DETAIL OF OUR PROJECT AND WRITING ALL THE FACTS ASSOCIATED WITH THE APP WAS DONE BY. HE HAS ALSO PREPARED THE POWERPOINT SUMMARISING THE WHOLE PROJECT.
- **HIMANSHU GOTRA –**VIDEO MAKING AND EDITING PART WAS DONE, AND HE ALSO HAD THE ROLE OF FINALISING ALL THE FILES BEFORE SUBMITTING THE PROJECT.

4 References

https://courses.lumenlearning.com/boundless-biology/chapter/nutritional-requirements-of-plants/

https://www.frontiersin.org/articles/10.3389/fevo.2017.00070/full

https://www.sare.org/Learning-Center/Books/Building-Soils-for-Better-Crops-3rd-Edition/Text-Version/Management-of-Nitrogen-and-Phosphorus

https://www.jagranjosh.com/general-knowledge/list-of-major-crops-and-required-geoclimatic-condition-across-the-world-1488802282-1

https://nifa.usda.gov/topic/agriculture-technology

https://www.forbes.com/sites/jenniferhicks/2016/12/31/take-a-look-at-how-technology-makes-smart-and-sustainble-farming/#35a6c8403deb

https://www.precisionag.com/digital-farming/what-is-digital-farming-really/#:~:text=Digital%20farming%20is%20applying%20precision,cultivation%20issues%20across%20the%20farm.