

Implementation Paper on an Android Application for Farmers to Solution of their Problems and for Selling Products

Parth Kakade¹, Pranav Jawale², Swapnil Kad³, Suraj Ekhande⁴, Prof. S. P. Jadhav⁵

Students, Department of Information Technology^{1,2,3,4}

Guide, Department of Information Technology⁵

Sinhgad College of Engineering, Pune, Maharashtra, India

Abstract: *The Virtual Fruits Market application offers a unique platform for Indian farmers to directly connect with end-users, ensuring a fair and consistent price for their produce. With this platform, farmers can receive better profits for their yield, while end-users can benefit from the availability of high-quality products at affordable prices. The app also provides access to experts who can offer solutions to farmers, enabling them to make informed decisions and optimize their profits. Furthermore, the app ensures that the solutions provided are exclusive and of the highest quality, making it a valuable tool that creates a win-win situation for both farmers and end-users. Overall, the Virtual Fruits Market app is a beneficial tool that serves as a reliable bridge between farmers and end-users.*

Keywords: Virtual Fruits Market app, Quality products, Expert access, End users, Optimize profit

I. INTRODUCTION

The agricultural sector in India is critical, and farmers have been struggling with issues like inconsistent pricing and lack of direct access to end-users. However, the Virtual Fruits Market app has changed the game for farmers and end-users alike. This innovative platform directly connects farmers with end-users, ensuring fair and consistent pricing for farmers and high-quality products at lower prices for end-users. The app also provides expert solutions for farmers, helping them make informed decisions and increase their profits. With its unique and high-quality solutions, the Virtual Fruits Market app creates a mutually beneficial situation for all parties involved. Overall, the app is a revolutionary tool that has the potential to transform the Indian agriculture sector by empowering farmers, promoting sustainable agriculture practices, and facilitating direct connections between farmers and end-users.

II. LITERATURE SURVEY

Android application for farmers to solution of their problems and for selling products: [1] The goal of our work is to understand how Android usage, apps, operating systems, hardware and user habits influence battery lifespan The data we collect, which is publicly available and by different channels, is sufficiently heterogeneous for supporting studies with a wide range of focuses and research goals, thus opening the opportunity to inform and reshape user habits, and even influence the development of both hardware and software for mobile devices. Hugo Matalonga, Bruno Cabral, Fernando Castor, Marco Couto Rui Pereir Simao Melo de Sousa and Joao Paulo Fernandes [2] Monitoring And Controlling Smart Hidroponics Using Android and Web Application Smart hydroponics is a modern agricultural technique that employs technology to measure nutrients in water using a TDS meter, pH levels with a DIY sensor, and temperature using a DS18B20 sensor. The Arduino Uno microcontroller facilitates real-time monitoring of hydroponic plant parameters, and Firebase serves as a database for storing and analyzing sensor data. Web and Android applications enable remote monitoring, enabling farmers to track plant growth and improve crop yields.. Based on the results of the hydroponic smart test that has been built, it can help hydroponic farmers in monitoring the growth of their plants so that they can produce maximum yields, Ivan Sheva, Muhammad Firdaus.

[3] Integrated Framework for Farmer Centric Agriculture Applications Using IoT Architectures, a integrated framework is proposed in this paper with a combination of modern technologies like IoT, Mobile and Android software modules

that can address most of the above issues. Proposed framework automates the process of connecting, communicating and conveying different aspects of efficient and economic agriculture practices by empowering even the illiterate farmers with latest mobile GUI. Suggestion module from experts relating diseases, water requirements, Data analysis and forecasting module and Farmers Ecommerce are some of the value Add-on applications integrated into the proposed framework, J.S.Sunil, R.Charitha, P.Kalpana, Dr.Raja Vara Prasad [4] Digital Market : E-Commerce Application For Farmers, The concept of a digital market pertains to a specialized platform that aims to connect farmers, merchants/markets, government entities, and end-users, serving as a bridge to overcome the existing gap between them. This approach will not only keep farmers in the loop with the latest market trends but also enable broader awareness of the dynamic market conditions. Farmers face numerous challenges, one of which involves the difficulty of earning a profitable return on their investment of time and resources. There exist different reasons like season limitation, crop life due to which farmer get very limited amount of time to stud the market conditions. To ensure that farmers receive fair prices for their crops and products, it is essential to conduct a thorough study of the current market trends in the agriculture sector. However, this can be a time- consuming and challenging process, especially for farmers who have limited time and resources. Traditionally, farmers have had limited access to potential buyers, which has restricted their options for selling their products. To overcome these challenges, it is important to introduce new marketing methods that enable farmers to sell their crops and products at every stage of the marketing chain. This includes selling to merchants, markets, and even directly to end-users, providing farmers with multiple options to choose from, Mrs. Manisha Bhende ,Ms. Mohini S. Avatade ,Mrs. Suvarna Patil,Mrs.Pooja Mishra ,Ms. Pooja Prasad , Mr. Shubham Shewalkar [5]KrishiAI - An IoT and Machine Learning based Mobile Application for Farmers The Virtual Fruits Market app offers a direct platform for Indian farmers to connect with end-users, receive fair pricing for their produce, and access expert solutions. The use of the KNN algorithm promotes transparency in the supply chain, allowing end-users to make informed decisions about the quality of the produce they are purchasing, Devashish Manoj Gopalani ,Raghav Rajendra.

III. PROBLEM STATEMENT OF SYSTEM

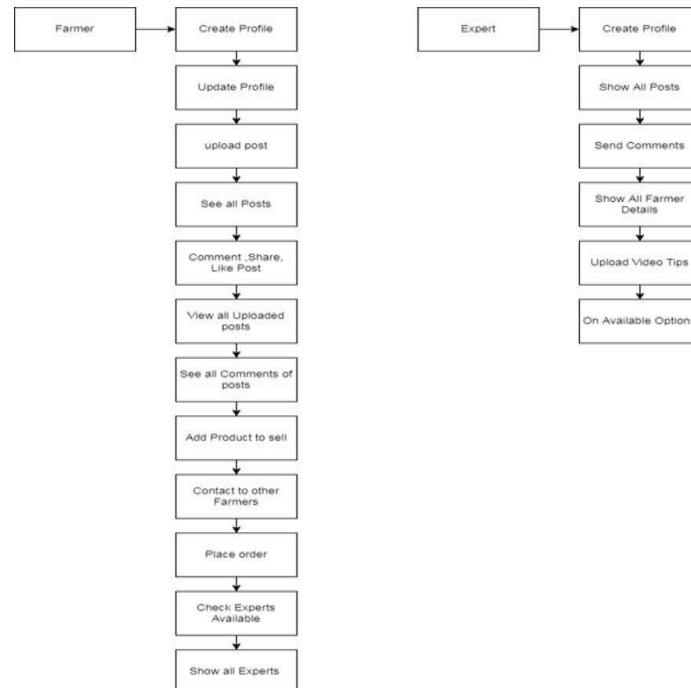
The Virtual Fruits Market app addresses the issue of a lack of a direct and equitable connection between Indian farmers and end-users, which results in low profits for farmers and high prices for end-users. The app aims to provide a platform that facilitates a direct connection between farmers and end-users, ensuring fair and consistent prices for farmers, and access to expert solutions to maximize their profits. The objective is to create a mutually beneficial situation that benefits both farmers and end-users and enhances the overall quality and affordability of produce in the market. Moreover, the app promotes transparency in the supply chain by providing end-users with information about the source and quality of the produce they purchase. This helps establish trust between farmers and end-users, leading to increased sales and profits for farmers, and affordable, high-quality produce for end-users. Overall, the Virtual Fruits Market app is an innovative solution that transforms the way farmers and end-users interact and benefits both parties equally.

IV. IMPLEMENTATION DETAILS OF MODULE

The proposed system contains following:

4.1 Pre-processing

To develop the Virtual Fruits Market app, extensive research may have been conducted on the current state of the fruit market in India, the challenges faced by farmers, and the needs of end users. Based on this research, the project team would have created a detailed plan that outlines the app's features, functionality, and user interface. The app's design may have been created, including the user interface and user experience (UI/UX) design. The development team may have chosen appropriate programming languages and software tools to build the app, such as Java, Python, React Native, and Firebase. Additionally, testing and quality assurance processes would have been implemented to ensure the app is functional, reliable, and meets the needs of farmers and end users. Overall, developing an app like Virtual Fruits Market requires a comprehensive approach that considers both the technical and social aspects of the problem, and a strong team with expertise in various fields.



4.2 Building the KNN Model

The Virtual Fruits Market app has the potential to leverage its KNN model for various applications. For example, the model could be used to predict prices or demand for certain fruits based on historical data. However, this would require careful data collection and preprocessing, as well as defining the specific problem statement and selecting relevant features to train the model. Additionally, the KNN model can be used to provide recommendations to farmers on which fruits to grow based on end users' preferences and historical purchase data. This could involve training the model on a comprehensive dataset that includes information on end users' preferences, such as the most frequently purchased fruits, and using this data to make accurate predictions on which fruits will be in demand in the future. By leveraging advanced technology and data analytics, the Virtual Fruits Market app can enable farmers to make informed decisions and maximize their profits while also providing end-users with affordable, high-quality produce.

4.3 Working

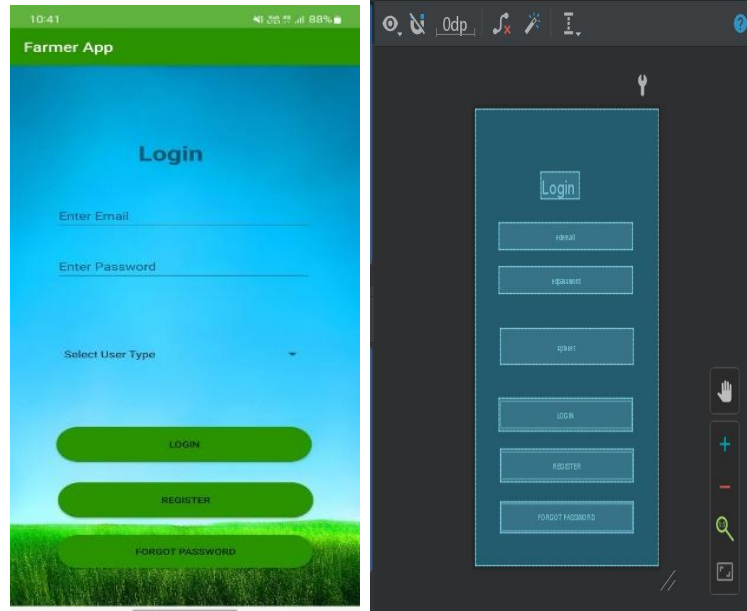
The Virtual Fruits Market app facilitates direct connections between Indian farmers and end-users, enabling farmers to sell their produce at a consistent and fair price, which guarantees better profits. End-users can enjoy high-quality products at affordable prices by purchasing directly from the farmers through the platform. Furthermore, the app offers access to expert solutions for farmers to make informed decisions and enhance their profits. The solutions provided are unparalleled, ensuring that farmers receive the best possible support. With its unique and high-quality solutions, the Virtual Fruits Market app is a valuable tool that benefits both farmers and end-users and creates a mutually beneficial scenario.

V. IMPLEMENTATION

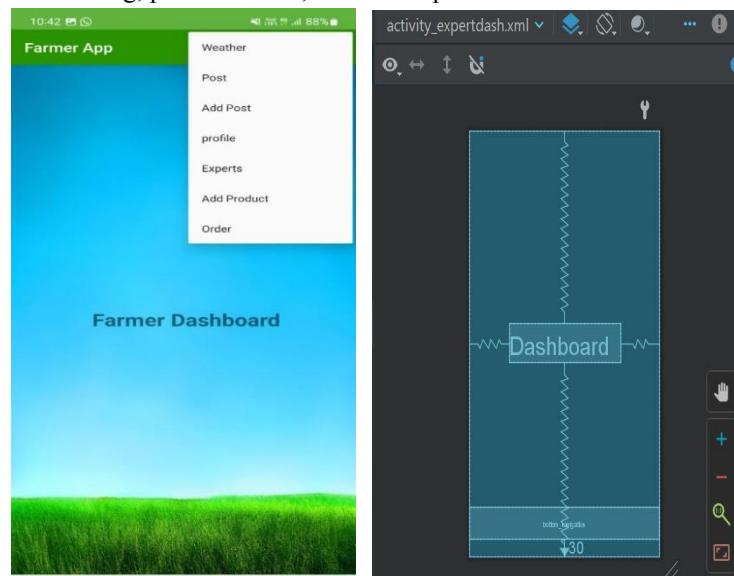
The application is designed from a user point of view such that GUI is simple and understandable. The user need not require any additional effort to understand the functionality and navigation in the application. The following are the main pages (screens) in GUI of this application:

1. Farmer Dashboard
2. User Login
3. Farmer post
4. Weather forecasting

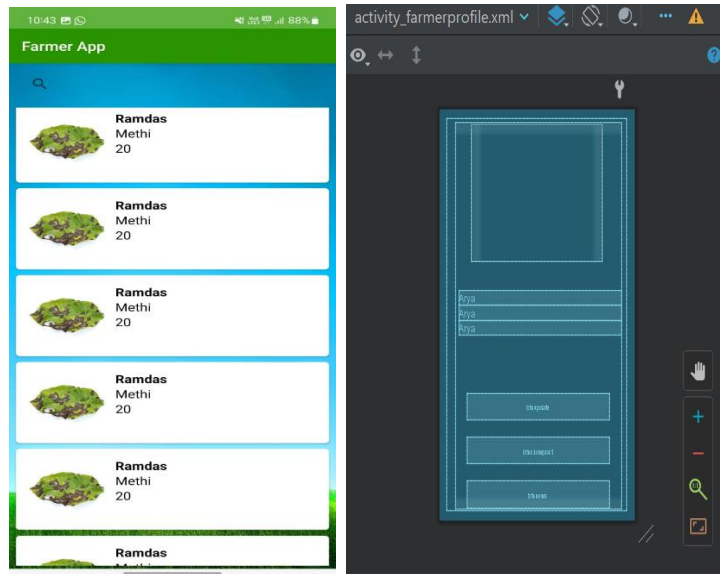
Welcome Page: The Home Page, the starting page of the application is shown in Fig. The Welcome Page has three buttons: Farmer Login, Expert Login and User login. The navigation to the Farmer Dashboard, Expert Dashboard and user login is done from this page with the help of these buttons.



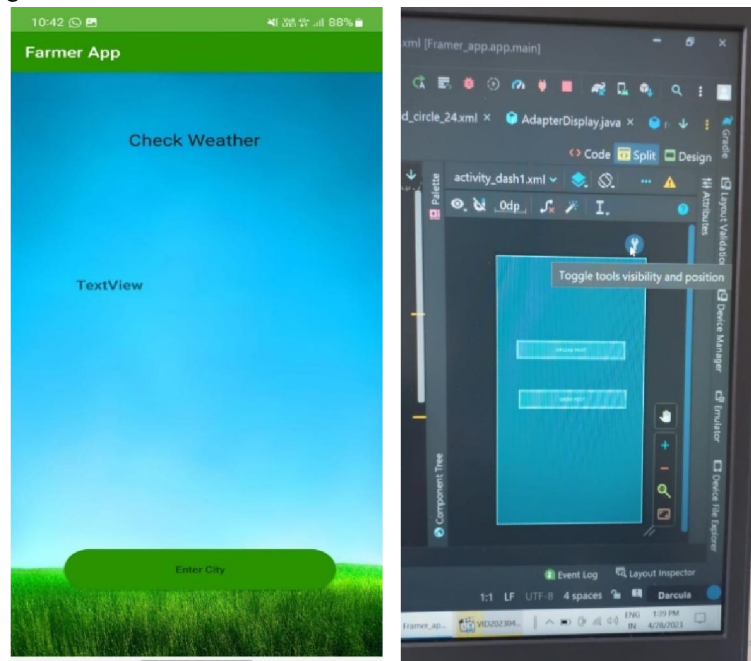
Farmer Dashboard: Farmer dashboard is shown in Fig. The dashboard contains seven buttons which gives functionalities like weather, post for selling, profile of user, whether expert available or not and for adding product.



User Dashboard: In user dashboard, user can see the products of farmer for sell. Farmer can order these products by using SMS authentication.



Weather forecasting : By using weather API of farmer can find out weather is suitable for harvesting or not. GUI of the screen is given in below fig.



VI. CONCLUSION

The Virtual Fruits Market app offers an innovative solution to the persistent problem of the absence of a direct and equitable connection between Indian farmers and end-users. The app provides farmers with a direct platform to connect with end-users, ensuring fair pricing for their produce, and access to expert solutions to enhance their profits. The use of KNN algorithm promotes transparency in the supply chain, allowing end-users to make informed decisions about the quality of the produce they purchase. The app fosters trust, sustainability, and mutual benefits for both farmers and end-users. Overall, the Virtual Fruits Market app is a transformative tool that leverages advanced technology to bridge the gap between farmers and end-users and create a more equitable and efficient agriculture ecosystem in India

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