

Farming Assistant Android Application Service

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Abstract: *This survey paper offers a comprehensive overview of various technologies and methodologies utilized in smart agriculture Web Application. We explore recent developments in Web Application For Farmers, product Delivery, Java Based Web Application, and their application in farming Assistant Web Service. Additionally, We Will Develop Farming Assitant Web Service For Farmers & agriculture market trends. Using This Application farmer can be connected directly to the customer and the selling can be done accordingly.*

Keywords: Agriculture, Farm Assistant, Dealer, Customer, Shopping cart, Java, Android, Agricultural Product

I. INTRODUCTION

As we step forward into the modern era of technology, we may find many engineering related applications very beneficial for improvements into the society. This is the world of technology where people use smart phones for completing their daily tasks like shopping, paying bills, managing work and much more. The idea of this project is to add its features into the lives of the people so that the food which they buy can be bought directly from the farm so that the profit can reach directly to the farmers. It's designed to be easy for farmers to use and comes with some really helpful features. First, farmers can list all the details about their crops, like what kind they are, how much they have, the quality, and when they expect to harvest. Farmers can also see real-time prices in the market, which helps them decide when to sell their crops to get the best prices.

Objectives

- **Maximizing Yield:** Many farmers aim to maximize the quantity of crops or livestock they produce. This objective is often driven by the need to generate income and meet market demands.
- **Quality and Consistency:** Some farmers prioritize producing high-quality products that meet specific standards or certifications. Consistency in product quality is important for building a good reputation in the market.
- **Diversification:** Farmers may aim to diversify their product offerings to reduce risks associated with relying on a single crop or livestock type. This can involve growing multiple crops or raising different types of animals.
- **Sustainability:** Sustainable farming practices focus on minimizing the environmental impact of agriculture. Farmers with sustainability objectives may aim to reduce chemical use, conserve water resources, and promote soil health.
- **Profitability:** For many farmers, the primary objective is to generate a profit. This involves managing input costs, optimizing production processes, and selling products at competitive

Purpose

The purpose of this survey paper is to provide a comprehensive overview of the current state of the Farming assistant web application service (FAWS) that utilize using Java. It aims to review existing research, technologies, and applications in this field to understand the advancements, challenges, and future directions. The scope of this paper covers various aspects of FAWS, including datasources, Sequence Diagram, system architectures, Data Flow

Diagram, case studies, challenges, and future prospects, offering valuable insights for researchers, practitioners in agriculture and technology

II. RELATED WORK

Reviewing related work is an essential component of any research project. For Farming Assistant Web Application Service, you should explore existing studies, research papers, and projects that are closely related to your work.

“The Farm Assistant-Web Application for Farmers”- In this proposed system the agricultural information system provides its users and researches to get online information about, the crop, statistical details, new tendency and tracking of vehicles The trends of the fertilizers, plants act so that these will be pretty important to the users who access these via the Internet. The main features of the information system includes information retrieval facilities for users from anywhere in the form of obtaining statistical information about fertilizer and production. Web Application also helps in relationship and communication between customers and farmers. This Application also helps in booking vehicles regarding Farm like Tractor or Mini Tractor with their other equipments, etc. It becomes necessary to establish such systems which help to resolve farmer’s problem through Web Application. The requirements needed for the application are: Details of products from farmers and consumers, Expert analysis, Cost estimation, Quality check.

“Farming Assistant Using Web Service”. Keywords: Machine Learning, Artificial Intelligence, OpenCV, Support Vector Machine, Plivo Python SDK, Python, MySQL - This proposed system was be provide guarantees greater profitability than the outdated manual system is the agricultural web service. This will be accomplished through direct communication between the provider and the farmer as well as other aspects of the project. This solution enhances business contact between farmers as well as between farmers and suppliers. By eliminating intermediaries, it also increases transparency among suppliers and farmers. This system has a variety of benefits, including digital KYC, which enables farmers to upload their documents without travelling to a center and wasting a lot of time, AI chatbots used to answer questions, SMS notifications for advertisements, and fertilizer recommendation systems to assist farmers based on soil needs. Farmers in a region typically know little to nothing about farming and are just familiar with the crops they have been growing for a long time. The Farming Assistant website aspires to be a one-stop resource that will unite farmers across the nation to share expertise and support one another, as well as give news on agriculture to keep farmers informed of changes in their industry.

“Farming Assistant Web Services: Agricultor”- In this research paper they provides assistance to new as well as establish farmers to get the solutions to day-to-day problems faced in the field. A farmer gets to connect with other farmers throughout India to get more information about a particular crop which is popular in other states. In this research paper they was solved the following problem- One of the problem statements is that farmers of different states don't have a way of communication between them. There is no proper way of knowing the current prices of things farmers require while farming, the information is scattered on the internet and hence, time consuming. The farmers often end up paying more for seeds, fertilizers, etc. Agricultor will create a community section in which farmer brothers from different states can interact with each other, answering each other's questions. Agricultor will be minimal as well as sufficient so that anyone can easily use the website.

III. RESULT ANALYSIS

The architecture of the whole project is analysed. System analysis is the process of defining the architecture, components, and data of a system to satisfy specified requirements. Design is a method of studying a system by examining its component parts and their interactions. Before implementation began the system was analysed and designed. In this section, use cases, requirement analysis, and other part are described in details.

Web service of farmer product required the following requirements. This has mainly four actors. Those are Admin, Farmer and Dealer. This website give service of farmer product to sell holder is known as dealer.

IV. PROPOSED SYSTEM

The proposed system, known as the farming assistant project, is like a helpful tool for farmers. It's designed to make their lives easier and more profitable. You see, right now, when farmers want to sell their crops, they often have to involve middlemen or other people. These middlemen can sometimes take a part of the money that should rightfully go to the farmers. But with this project, things are different. It lets farmers sell their crops directly to buyers, like how you might sell something online without needing a store. This means farmers can get the best prices for their crops without anyone else taking a share of their earnings. The project also provides valuable information to farmers. It tells them where and when they should sell their crops for the highest prices, a bit like getting tips on when to sell something for the most money. This way, farmers can earn more money for their hard work and have more control over their farming business. It's like giving them a powerful tool to succeed in farming and ensure they get the fair prices they deserve.

4.1 Architecture

The architecture diagram represents the overall design of the project. The System architecture of Farming Assistant Web Application include:

Admin

In this module, the Admin has to log in by using valid user name and password. After login successful he can do some operations such as View All Users and Authorize, View All E-Commerce Website and Authorize, View All Products and Reviews, View All Products Early Reviews, View All Keyword Search Details, View All Products Search Ratio, View All Keyword Search Results, View All Product Review Rank Results.

View and Authorize Users:

In this module, the admin can view the list of users who all registered. In this, the admin can view the user's details such as, user name, email, address and admin authorizes the users.

View Charts Results:

View All Products Search Ratio, View All Keyword Search Results, View All Product Review Rank Results.

Ecommerce User :

In this module, there are n numbers of users are present. User should register before doing any operations. Once user registers, their details will be stored to the database. After registration successful, he has to login by using authorized user name and password Once Login is successful user will do some operations like Add Products, View All Products with reviews, View All Early Product's reviews, View All Purchased Transactions.

End User :

In this module, there are n numbers of users are present. User should register before doing any operations. Once user registers, their details will best or to the database. After registration successful, he has to login by using authorized user name and password. Once Login is successful user will do some operations like Manage Account, Search Products by keyword and Purchase, View Your Search Transactions, View.



Fig. System Architecture

V. IMPLEMENTATION AND TECHNOLOGY

Android is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets. Android is developed by a consortium of developers known as the Open Handset Alliance and commercially sponsored by Google. It was unveiled in November 2007, with the first commercial Android device launched in September 2008.

It is free and open source software; its source code is known as Android Open Source Project (AOSP), which is primarily licensed under the Apache License. However most Android devices ship with additional proprietary software pre-installed, most notably Google Mobile Services (GMS) which includes core apps such as Google Chrome, the digital distribution platform Google Play and associated Google Play Services development platform. About 70 percent of Android smartphones run Google's ecosystem; competing Android ecosystems and forks include Fire OS (developed by Amazon) or LineageOS. However the "Android" name and logo are trademarks of Google which impose standards to restrict "uncertified" devices outside their ecosystem to use Android branding

Module 1

Android Studio: Android Studio is the official [7] integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. [8] It is available for download on Windows, macOS and Linux based operating systems or as a subscription-based service in

2020.[9][10] It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE for native Android application development.

Module 2

FIRE BASED: Firebase is a cloud service designed to power real-time, collaborative applications for mobile and web.

WHAT IS FIRE BASED?

Firestore is a platform developed by Google for creating mobile and web applications. It was developed from Envolv, a startup founded by James Tamplin and Andrew Lee in 2011. It was acquired by Google in 2014 for offering mobile and web app development with their other technologies.

Module 3

Admin: Admin has important parts farmer and customer as user and supplier. Admin has to maintain relationship between Farmer and Customer.

Following are the steps involved in Admin Module.

- View Complaints: This page contain the complaint of the farmer
- Farming Tips: The admin gives the farming tips to the farmer

Module 4

User: User has to register himself first in the system. User authentication will be get done in system by sending OTP to Email id. User has different task to perform, User can update his information in profile.

- Updating of profile.
- User can Sell their Farm products, Instruments by updating product details
- Check Transportation status

VI. LIMITATIONS

- Some farmers in remote areas may not have internet access to use the project.
- Farmers who aren't familiar with technology might find it a bit tricky to use the online platform.
- The project relies on market data, which may not always predict the real market conditions perfectly.

VII. BENEFITS

- More Money: Farmers can earn more money because they don't have to share it with middlemen.
- Direct Selling: They can sell their crops directly to buyers without involving other people.
- Time and Effort Saved: Farmers save time and effort because they can do everything online.
- Better Prices: The project helps them find the best prices for their crops.
- Market Insights: It provides information about when and where to sell for maximum profit.
- Control: Farmers have more control over their business and earnings.

VIII. CONCLUSION

In Conclusion This system will help farmers and food processing industry and user to get the better return. It protects the interest of both consumers and producers. This application is a single window where all the agriculture industry, farmers and user negligible loss. The marketplace is the main communication link between farmers and the retailers/FPI. They acquire various taxes and transportation money from both the sides hence marketplace charges much higher rates. This system will help the farmers to compare the price with the market and sell according to it.

The Farming Assistant web service is created to fix the problems of the old manual way of doing things and match the needs of today. It will use technology to make farming better and help farmers earn more money. It will make farming more modern and clear. Farmers will deal directly with suppliers, which is better. This will save time and energy for both farmers and customers. This web service will connect everyone in the farming industry

REFERENCES

- [1] Hrutik Ashok Pansare, Aniket Gangaram Ghaytadkar, Nikhil Jagannath Bandgar “The Farm Assistant-Web Application for Farmers”.
- [2] Prarthana Kamthe, 2Rutuja Adhav, 3Saloni Gaikwad, 4Shaheen Shaikh“Farming Assistant Using Web Service”.
- [3] Garima Mathur, Juhi Ahuja, Kishore Sohanda, Kshitij Bohre, Santosh Varshney, Shivshankar Rajput. “Farming Assistant Web Services: Agricultor”.
- [4] Mishra, N. K. ”FAO/AFMA/Myanmar on improving Agriculture Marketing.” Journal on Agricultural Marketing Information System 15, no. 4 (2003): 2-4.
- [5] Pathak N., “ Contribution of Agriculture to the Development of Indian Economy”, The Journal of Indian Management and strategy, 2009, vol 14, issue no 1, pp.no 52- 56.
- [6] Mehajabin Nadaf*1, Sumaiya Nadaf*2, Mubashira Panhalkar*3, Arpita Patil*4, Nilesh Kadam*5, Prof. Seema A. Bandagr*6 FARMING WEB ASSISTANCE USING WEBSERVICE