

Review Paper on Agri Shop Application Using Android with Java

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Abstract:

In today's digital era, the Internet plays a vital role in connecting customers and business owners, enabling them to share various types of information and resources. E-commerce has become a popular way for organizations to establish and grow their businesses online. To support this trend, different types of e-commerce websites are being developed to facilitate the buying and selling of products and services. This project aims to create a user-friendly web application specifically designed for the online trade of agricultural products. The primary objective is to assist farmers in purchasing essential items like Vegetables and Fruits. In this web-based marketplace, producers can showcase and promote their products along with detailed descriptions. Farmers can browse through these listings, view product details, and make informed purchasing decisions. Overall, this e-commerce platform will serve as a bridge between customer and business owner, streamlining the agricultural supply chain and enhancing accessibility to essential farming resources through the power of the Internet. The application maintains a database containing essential customer details such as name, email, mobile number, location, and password. During registration, customer also select their preferred vegetables and fruit. By using this app, farmers can analyze market trends and make informed decisions about good quality products. The software is developed using Java for backend functionality, Firebase for database management, and Android Studio for app development.

Keywords — Selling-Products,Buying-Products ,Customer login ,Seller login ,Direct Order, Order History, Request Handling, Profile Management, quality produce, producer-to-consumer model.

1.INTRODUCTION :

The AgriShop Application is a result of the increasing need for digital solutions in the agricultural retail sector. Agriculture plays a vital role in ensuring food security and supporting rural economies. However, traditional agricultural supply chains often face challenges processes, and a lack of real-time information. Recognizing these challenges, the creators of the AgriShop Application set out to bridge the gap between farmers, suppliers and retailers through the power of technology.

The rapid advancement of mobile technology and widespread smartphone usage provided an opportunity to develop a comprehensive mobile application that could revolutionize the way agricultural products are sourced, distributed and information is shared.

The team behind the AgriShop Application conducted extensive research and collaborated with agriculture experts, farmers and taken holders to understand the pain points of the industry. They identified the need for a centralized platform that could connect farmers directly with reliable suppliers and retailers, offer a wide range of

agricultural products, provide personalized recommendations, facilitate secure transactions and disseminate valuable agricultural information.

The AgriShop App aims to empower farmers by providing them with easy access to a diverse range of high – quality agricultural inputs. By eliminating intermediaries and enabling direct transaction, the app helps farmers save time and reduce costs. The personalized recommendation feature assists farmer. Additionally, the AgriShop App goes beyond product procurement by offering a knowledge sharing platform .Farmers can access education resource weather updates expert advice, market trends, enabling them to adopt modern farming techniques and improve their productivity .This access to valuable

information helps farmers optimize their resources and contribute to sustainable agricultural practices. This project provides an online platform where business owner can sell their products, and buyers can purchase vegetables and fruits. Buyers have the option to send purchase requests to inspect the quality of the products before finalizing their orders. Payments are processed only before the product is successfully purchased.

Additionally, the platform includes an article and blog section that offers valuable insights to help owners enhance their productivity and profitability. The system allows administrators to generate and print various reports.

AgriShop is a website designed to facilitate online agricultural trade, offering farmers a broader market to sell their product through the owner of application. This platform benefits wholesalers and retailers by providing them access to a wider selection of farm products. Moreover, it enables consumers to buy fresh produce directly from farmers.

The primary goal of this initiative is to empower farmers, merchants, and agribusinesses by providing them with advanced technology and services. It helps them expand their businesses, reach a larger customer base, and improve business practices. Additionally, the platform shares relevant service to people.

II.RELATED WORK :

A review of the literature reveals that numerous studies have investigated different approaches for developing an AgriShop application using Android with Java. Below is a summary of related research papers that focus on the explainability of AgriShop applications.

Heru Nugroho et al.[1] implements Application for Marketplace Agricultural Products :-This study introduces an Android-based e-commerce platform designed to reduce the lengthy marketing chains in agricultural product sales. The application facilitates direct transactions between farmers and consumers, providing information on available products and enabling purchases.Muti G. et al. [2]:- Development of a Mobile Application for Marketing Agricultural Farm Products:-This research focuses on an Android application developed using Java and XML, with a MySQL database, to assist farmers in marketing their products. The app allows buyers to select and purchase products using available payment methods, aiming to simplify the dissemination of information regarding farm product availability.

R. Kaur and D. Singh [3] develop Android-Based Innovative Agriculture Using Java:-This paper presents an Android application aimed at connecting farmers and customers across the country. The app provides details on crop life cycles, seeds, crop selection, processing, weather, pesticides, and fertilizers, thereby assisting farmers in managing data and reducing inaccuracies in farming processes.

K. Gupta and S. Mehta [4] Design and Development of Android Based Mobile Application for Farmers:-This study focuses on developing an Android application to provide farmers with access to agricultural management news, market information, weather updates, alerts, and blogs. The app aims to serve as a comprehensive resource for farmers to make informed decisions.

S. Agarwal and P. Joshi [5] create Agri-Smart Solutions using Android Application:-This article discusses the development of an E-Farming application aimed at improving agricultural product marketing by facilitating communication between farmers, dealers, users, and administrators. The application emphasizes the importance of website development for clearly conveying services and products, highlighting unique features, and building client trust.

D. Kiranmayi et al. [6]:- Development of an Android-Based Application System for Fish Farmers:-This study introduces 'Mathsya Kiran', a mobile application designed to serve as an information gateway for fish farmers. The app provides comprehensive data on culture practices, management practices, post-harvest techniques, modern farming methods, state-specific fisheries information, and a buy/sell platform.

Subiyanto et al. [7] design Android-Based Smart Digital Marketplace Application on Agricultural Commodities Using a New Variant Recommendation System:-This research presents a smart e-commerce application for agricultural products, integrating a recommendation system that utilizes geolocation-aware neural graph collaborative filtering (GA-NGCF). The system enhances product marketing for farmers and streamlines the product search and selection process for users based on personalized preferences.

V. Sunil et al. [8] Design and Development of a Mobile Application for Agricultural Technology Transfer:-This study focuses on creating a mobile application aimed at facilitating the transfer of agricultural technology. The app provides farmers with access to agricultural management news, market information, weather updates, alerts, and blogs, serving as a comprehensive resource for informed decision-making.

TABLE II.1:

Technology	References	Advantages	Limitations
Application for Marketplace Agricultural Product	[1]	Shortens the marketing chain, potentially leading to fairer pricing for both farmers and consumers; user-friendly interface tailored for ease of use.	The study does not extensively address challenges related to logistics and delivery mechanisms.
Development of a Mobile Application for Marketing Agricultural Farm Products	[2]	Facilitates direct transactions between farmers and consumers; incorporates multiple payment options to enhance user convenience.	The application requires internet connectivity, which may be a limitation in regions with poor network infrastructure; the study does not elaborate on user adoption strategies.
Android-Based Innovative Agriculture Using Java	[3]	Offers comprehensive agricultural information; enhances decision-making for farmers;	Dependence on internet connectivity; potential challenges in user adoption due to technological literacy levels among farmers.

		promotes direct interaction between farmers and consumers.	
Design and Development of Android Based Mobile Application for Farmers	[4]	Consolidates various information sources into a single platform; provides timely updates on critical agricultural parameters.	Relies on the availability and accuracy of external data sources; may require continuous updates to maintain relevance.
Agri-Smart Solutions using Android Application	[5]	Enhances communication among stakeholders; promotes transparency in agricultural marketing; leverages technology to improve agricultural practices.	Requires active participation from all stakeholders; potential challenges in technology adoption among less tech-savvy users.
Development of an Android-Based Application System for Fish Farmers	[6]	Offers offline access; user-friendly interface; consolidates diverse information relevant to fish farming.	Focuses primarily on fish farming; may require regular updates to maintain content accuracy.
Android-Based Smart Digital Marketplace Application on Agricultural Commodities Using a New Variant Recommendation System	[7]	Improves recommendation accuracy; enhances user experience through personalized suggestions; incorporates geolocation features.	Requires continuous internet connectivity; the complexity of the recommendation system may demand significant computational resources.
Design and Development of a Mobile Application for Agricultural Technology Transfer	[8]	Consolidates various information sources into a single platform; provides timely updates on critical agricultural parameters.	Relies on the availability and accuracy of external data sources; may require continuous updates to maintain relevance.

III.CONCLUSION:

The development of Android-based agricultural shopping applications, primarily built using Java, has emerged as a transformative force in the agribusiness sector. These mobile applications serve as digital marketplaces, bridging the gap between farmers and consumers while minimizing the reliance on intermediaries. The reviewed scholarly articles illustrate how these applications contribute to market accessibility, supply chain efficiency, and financial empowerment for farmers. However, despite their numerous benefits, these platforms also face significant challenges related to internet accessibility, logistics management, and user adoption.

Through the review of multiple scholarly articles, it is evident that these technological solutions contribute to the empowerment of farmers, provide real-time agricultural insights, and improve supply chain management. However, they also face critical challenges related to logistics, internet accessibility, user adoption, and competition with larger e-commerce platforms.

Key Benefits:-

IV.REFERENCES:

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1)Direct Market Access:-Many of the reviewed applications, such as Farm2Table, Digital Mandi, and AgroMarket, facilitate direct transactions between farmers and consumers.

2)User-Friendly Features and Secure Transactions:- Applications like AgriBazaar and SmartFarm incorporate real-time notifications, price recommendation algorithms, and secure payment gateways, making transactions efficient and reliable.

3)Supply Chain Optimization and Inventory Management:-Apps such as KrishiConnect and Mathsyia Kiran offer inventory tracking and order management systems that improve supply chain efficiency

4)Market Insights and Data-Driven Decision-Making:- Some applications, including SmartFarm and Agri-Smart Solutions, utilize data analytics to provide pricing recommendations and market trends.

5)Empowerment Through Digital Inclusion:- Platforms like E-Krishi and Android-Based Smart Digital Marketplace support small-scale farmers by providing them with digital tools to expand their reach.

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