

# A Concise Survey on Android Application for Farming and Chat System

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**Abstract:** *Mobile devices are now widely utilized by everyone, including farmers and individuals in rural areas. Because agriculture is the backbone of the Indian economy, mobile-enabled information services and the rapid rise of mobile telephony have improved information sharing in the knowledge-intensive agriculture field. Farmers can use the mobile application to access a variety of information services that aid in farm management, control, and monitoring. Farmers can use a mobile app to expand their farming operations and increase their profits. Now that organic veggies and fruits have evolved, everyone has started farming in their backyards, terraces, and their own homes. This application is to assist all regular humans in guiding a way to harvest and therefore the whole guidance of harvesting.*

*This application mainly aims at providing better support to the people who are willing to practice household farming, terrace farming, or kitchen backyard farming. The users or the consumers have an option to purchase their preferred seeds to farm. The details regarding the seed will be displayed in the description. Consumers also have an option to chat with experienced farmers to clear any sort of doubts they will be facing during farming. Experienced farmers also have an option to sell their seeds through this application.*

## 1. INTRODUCTION

Agriculture is one of the consistent needs of human beings. Human beings have been practicing agriculture for a long ago and are also a consistent thing which we are following these days too. Before the widespread of agriculture, most of the time of the life of a human being was spent in hunting wild animals and collecting wild plants for their daily food. Later on, people practiced growing plants and crops for essential needs. Agriculture can be of both animal agriculture and plants agriculture but, this project will be dealing with plants agriculture. The major agriculture products can be classified into foods and fibers. Over one-third of the workers in this world are working in the agriculture field. One of the main challenges the agriculture field now faces is the problem

of global warming. Changes in temperature, climate, weather, rainfall are some of the challenges faced by the agriculture field due to global warming.

## **2. RELATED WORKS**

### **2.1 Agriculture based application for farmers**

According to a survey in an article (2021), the article describes that the project mainly aims at providing the best ideas for farming. The application which is developed provides the facilities like ideas regarding agriculture, weather forecasting, smart farming ideas, recent market prices, agricultural ideas, and knowledge regarding the crops. Apart from that, there is an issue faced by the farmers that sell the product or goods, such as middle persons making the profit, so a seller platform is introduced. Apart from these features, there is an added feature where different news related to agriculture in different places is also added.

### **2.2 Smart Farm Application: A Modern Farming Technique Using Android Application**

According to a survey in an article (2018), the price of smartphones is decreasing and their popularity is becoming increasing day by day. Moreover, android is the mobile operating system used in a smartphone, most of its applications are freely available. The use of the smartphone is increasing in every sector of business, education, etc. India, an agriculture-based developing country, has more than 70% of its population depending on agriculture and farming. The growth in agriculture production directly increases the Indian Economy and vice-versa is also true. the lifestyle of Indian farmers and farming is varying rapidly due to the increase in non-agricultural opportunities. The technological innovations in agriculture are not reaching the farmers, either because most of them are illiterates or due to unawareness. As a result, the majority of farmers are unable to achieve the highest attainable production rate. The loss growing more than 40% worldwide which includes more than 19.1% of the loss. So, to overcome all these problems the Smart Farm application will introduce. This paper was proposed to be focused on Indian farmers as it addresses the key problems of getting Market updates for various products, weather updates, and rain information are all available, as well as multilingual help. Farmers will be able to sell their products on the worldwide market and make significant earnings as a result of this. This application will provide all types of information within one system.

### **2.3 A Modern Farming Techniques using Android Application**

According to a survey in an article (2015), it is described as The farmers, who were dependent on clouds for rain, now are looking into Cloud Computing (CC) for their solutions towards the cultivation of superior crops in today's modern agricultural world. The traditional methods used by the farmers, particularly in India, are very slow and undependable. A large amount of crops is getting damaged in the field due to bacterial attacks and lack of information resources. Annually, such losses amount to more than 40% of overall revenue. So, this paper suggests various farmers can use mobile computing in their mobile phones using this application. The main focus of this effort is on Indian farmers since it solves the key issues of acquiring market updates for various goods, weather updates, and rain information, as well as providing multilingual help. This will effectively help farmers sell their products in the global market and earn remarkable profits. As a result, this framework employs MC, which effectively places power in the hands of the farmer. Android SDK and other tools are used in the experimental setup. Android-based mobile devices are used for testing in this study.

### **2.4 Electronic Commerce: A Study on Benefits and Challenges in an Emerging Economy**

According to a study published in an article in 2016, information technology has played a critical part in the future development of financial sectors and the way businesses are conducted in a developing country like Bangladesh. Information and communication technology has wrought significant changes in all aspects of human life. E-commerce offers a lot of benefits to customers, including convenience in any location and the ability to gain a competitive advantage over competitors. In an emerging economy, this study foresees considerable difficulties.

### **2.5 Developing a smartphone app for m-government in agriculture**

According to an article published in 2014, the high penetration of smartphones and the advanced capabilities of the software that they can host forces public agencies to rapidly transform their services in the mobile government environment for maximizing the utility of services and minimizing the price. In this context, the aim of the paper is primarily to review smartphone use and capabilities in agriculture. An overview of apps

targeted to the agricultural business sector is provided. Second, based on a case study for agriculture, the possible use of cell phones for mobile government is examined, and a transactional mobile government app for the Android operating system is presented. The mobile government app is based on an electronic government system for farmers that was previously built. The design and technical components of the suggested app's implementation are shown and discussed. Such apps have the potential to be a viable solution for farmers, allowing them to access government information and transact with government institutions at their leisure and in their preferred location.

## **2.6 An analytical study of e-commerce in India.**

According to a survey of Basheer TK which was published in the year 2020, E-Commerce, often known as E-Commercial, is the most common use of computers and information technology in the management of the business and financial records. It helps in the transaction of any amount of money from any part of the world to other. With the help of debit and credit cards, we may buy anything online. The application of e-commerce is billing to customers, tracking payments received and payments to be made, and tracking supplies needed and items produced, stored, shipped, sold, etc.

## **2.7 Online Chatting Application.**

According to an article published in April 2020, Communication through the web is turning out to be absolutely necessary nowadays. Clients can communicate with others quickly and easily via online communication. Thinking about this, the online communication application must be capable of writings or pictures, or some other documents in a quicker manner with the least deferral or with no delay or reschedule. Firebase is one of the platforms that provides a consistent database and cloud administrations, allowing designers to easily create these applications. Texting can be considered as a stage to maintain communication. Android gives a better stage to create different applications for texting contrasted with different stages.

## **2.8 Android Chat Application Development using AWS**

Online chatting is a sort of verbal exchange that is carried out over the Internet, which makes use of an internet chat software to it. Online chatting gives the customers to enjoy real-time communication with the folks who are positioned geographically in a special region. This is it gives a real-time

transmission of messages from one person to other. Chat messages are normally quick in order that the alternative player responds to them quickly. Thereby, it makes the customers of the net chatting app, sense the chat like a real-time communicate. The on-line chat software lets in the consumer to deal with the unmarried message to an person receiver or more than one receivers this is with the aid of using the use of factor-to-factor verbal exchange and multicast verbal exchange techniques. All those parameters ought to be taken into consideration whilst designing a talk software at the side of those parameters the alternative critical parameter that must be taken into consideration is protection. There is a developing want for offering protection for the cellular chat applications, with a massive consumerwide variety it's miles very critical for a chat software to offer all protection for the statistics they keep and transmit for higher resistance to cyber-attacks. So, to offer protection all of the messages which can be being transmitted and the statistics saved within the database ought to be encrypted. For the garage of the consumer's info and their statistics, the AWS (Amazon Web service) is used. AWS is a cloud platform that gives numerous IT infrastructures like database, SQL, virtualization, and plenty of more. It lets in storing statistics from the net software and continues all of the consumer's element which enables within the registration and login of the consumer to the net chat software.

### 3. CHAT SYSTEM

A chat system is a peer-to-peer communication system in which participants exchange text messages and files. The system's user is described as client-server. Chat system is a type of distributed programming that consists of two components: a chat server and a chat client. All communication, including requesting chat server location information from a location server and displaying received chat messages, is supported by the chat client. Chat session will be run by the chat server, which will also manage all chat clients. Essentially, the chat client initiates a conversation by asking the communication parameter (server name and port number). Control messages (used to join and leave chat sessions, create chat rooms, and switch to chat rooms) and chat messages are two types of client-server communication (supports only public chat message). A talking system uses two transport protocols: Transport Control Protocol (TCP) and User Datagram Protocol (UDP) (UDP). TCP is used for control messages and UDP is used for conversation messages.

### 4. CONCLUSION

The application can be improved by displaying the nearest seed vendors' location on a map. This could be implemented by using Google API. The

application uses a third-party website now for the purchase of the seeds. The website can also be developed and hosted to make sure to not rely on third-party sources. This also ensures the security of data. Additional resources can also be added like a screen tutorial on how to plant the seeds, Tips to farm the seeds properly, etc. The UI can also be improved by adding a loading screen, adding vibrant color to the pages, etc.

## 5. SYNTHESIS

These various related studies and literature, the use of E-Commerce, and other chat systems aim at guiding people to farm according to their wish. These studies allow researchers to gain additional knowledge apart from what they already had when developing the proposed system. However, this study aims to develop an application that will be a complete guide for people who wish to do small-scale farming. This system also aims at guiding large-scale farming in the future.

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