Asian Journal of Applied Science and Technology (AJAST)
Volume 1, Issue 2, Pages 214-215, March 2017

Integrated Android Application for Effective Farming

S.Giri[1], N.Naveen Prasad[2], Satish Vasanthakumar[3], Mishmala Sushith[4] and C.A.Yogaraja[5]

[1]*UG Student, Department of I.T, KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, India. Email: girisoundar1996@gmail.com*
[2]*UG Student, Department of I.T, KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, India. Email: anto23prasad@gmail.com*
[3]*UG Student, Department of I.T, KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, India. Email: akon.satish0@gmail.com*
[4]*Associate Professor & Head, Department of I.T, KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, India. Email: mishmala@gmail.com*
[5]*Assistant Professor, Department of I.T, KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, India. Email: raja2dlas@gmail.com*

Article Received: 11 March 2017 *Article Accepted: 20 March 2017* *Article Published: 22 March 2017*

ABSTRACT

Mobile Application that helps farmer to know about activities to be carried out for Farming and its in-depth Details. It is an Integrated Farming Application that Contain Several Information like Market Price, Seasonal Crops, Weather forecasting, Consultancy Forum. The main scope of the app is, to provide solution for the agriculture, it will helpful for the farmers. The agriculture sector is rapidly transform into an industry of major important that must rely heavily on computer integrated management. The main aim and intention of this application is develop the application via smart also mentioned as integrated application. Today mobile devices are used frequently by everyone, including the farmers and countryside people. According to observations of Information and Communication Technologies (ICT) mobile plays vital role in daily life of farmers. The farmers, who were dependent on clouds for rain, now are looking into the Cloud Computing (CC) for their solutions towards cultivation of superior crops in today's modern agricultural world. The traditional methods used by the farmers, peculiarly in India, are very slow and undependable. The main awareness of this work is focused on Indian farmers as it addresses the key problems of getting the market updates of different products.

Keywords: Mobile Application, Cloud computing and Agricultural world.

1. INTRODUCTION

The agriculture is basic reason of production of food and raw material, which eventually is reason of survival of the population [2]. In Indian most of the population is dependent on agriculture. However, there is also need to review and revitalize the mechanism for updating the technology. In the upcoming years agriculture will see major changes. Unlike the earlier 'green revolution' which had a foundation of advanced pesticides and fertilizers, now the agriculture will be revolutionized with the help of technology.

Every developing economy has agriculture sector as irreplaceable pillar and so does India. In India the agriculture sector contributes close to 20% of GDP [2]. Either directly or indirectly, 60% of total population of India depends on agriculture. The vast majority of Indian farmers, which includes small-scale producers, are often unable to access the information and technological resources that could increase the yield and lead to better prices for their crops and products.

The wide spread network of mobile phones could be the game changer in this problem. It will put agriculture field to its zenith. The main purpose for such project is to develop a mobile phone based solution that helps in farm management, leads to agricultural yield improvement and helps in care/maintenance of the far.

2. EVOLUTION

An agriculture's field cannot developed by a particular period, it is a sequence process, from beginning to now a days, so many tools and methods are changed that is called "*Historical evolution of agricultural technologies in relation to information-communication-control technologies"* [3]. ANDROID: Information and communication technologies has seen a powerful role in daily life of farmers ICT (information and communication) in agriculture is an Emerging field focusing on the agricultural development in India. Introduction of ICT in Indian agriculture [1] enables the dissemination of requisite information at the right time.

Figure. Historical Evolution

<1800 1900 1940 1980 2000

3. ANDROID AGRICULTURE

Android is an open source development platform that offers to build the very powerful applications to developers. Android operating system is a stack of software components which is roughly divided into five sections like Applications, Application Framework, Libraries, Android Runtime, Linux Kernel and four main layers. It helps the developers to take free advantage of the device hardware, access location information, run background services, call divert and sms etc. Once the application has been published, it can download from third-party sites or through online stores such as Android Market, the app store run by Google [1].

4. EXISTING METHOD

Traditional Methods of Agriculture [2]

1. Traditional farming tolerated unpredicted environment whereas, Modern farming provide predictable environment by weather forecasting.
2. Traditional farming needs great amount of labour and various activities to go through for conducting farming.

On the other hand Modern farming does not need great amount of labour since the mobile and machines take care of everything.

3. Modern farming techniques using android application are done a lot quickly which brings in more profit for farmers.
4. Traditional farming tolerated unpredicted environment

Methodologies [2]

*Weather Forecast Report
*Crop Details
* Market Price
*Consultancy Forum

Weather Forecast Report

Weather forecasting is deal with science and technology to predict the state of the atmosphere for given time and for a given location. Human beings have attempted to predict the weather informally using their experiences. Weather forecasts are made by collecting quantitative data about the current state of the atmosphere at a given place and using scientific understanding of atmospheric processes to project how the atmosphere will change, after 24hrora week. This weather report will help the farmers to take necessary decision for their crops.

Crop Details

Agriculture is all about cultivation of Crops, Animals etc. Agricultural study says that growth of production will be dependent on climate, soil and medicines and fertilizers. And proper information help to grow production of food we are providing all detailed information about crop, fertilizers and animals etc.

Market Price

Market price include price of the product in market, include previous day market today's market and also expecting market of the next day.

Consultancy Forum

It is like a service call centre for farmers but some additional feature included, farmers can clarify their doubt and prescription via application and also can attach a photo to application, then experts will give a result and consultant.

5. CONCLUSION

We have discussed the application of intelligent approaches to optimization problems in agriculture, Different apps are developed and used by farmers for their specific purpose. All this apps have different usage as per its functionalities. Many apps are being utilized for different kind of functionality regarding the farming activities like cropping information, pesticides, fertilizer, seed, selling of crop, irrigation information, estimation of crop production, weather information and information regarding the best practices of farming. We found that many of the apps are static. Instead of that dynamic apps will be better to use. Also if all such listed functionalities are bundle into the one single app and in the native language of the farmer, then it is easy to utilize it. This android application is the complete package for farmers.

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