

Effective Market Analysis Based on Market Behavior for Agricultural Products to Improve Farmers Profitability

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ABSTRACT

Large population of our country is dependent on farming as their main profession. Due to green revolution and increase in education many farmers are moving towards technologies such as mobile applications and computers for their basic needs for shopping farming products online. In this paper we are going to define a novel approach using Android, Computer and cloud to design a better system that can useful for their needs. Our system is used as a website where a farming retailer can upload information about the products he sells. Then an Android application comes to the scene where a customer can view the information and various alerts that he needs to be received. To make the communication between a retailer and customer in a real time we are going to design a cloud based service handler using Google cloud which is free. To make the system more effective we are going to implement a data mining technique based on ranking which will rank the products and help the customer choose and compare the products he need. Our technique will also have a security mechanism to help protect the data from falling in wrong hands and increase the authenticity of the application.

Keywords: Android System , Cloud Computing, Data mining, Ranking Algorithm, Security.

1. Introduction

Today many technological universities and individuals are trying to increase the Excellence in Next Generation Networks, Systems, Services and to address the future challenges identified by the Government under the Digital Economy Theme and the Department of Science and Technology in India. One such area in rural India where Information and Communication Technologies (ICT) networks can have a major impact is Agriculture. Thus a new approach to building an Agricultural Advisory System aimed at bridging the information gaps that exist between farmers and farming e-retailers. It demonstrates the power of two-way mobile phones today, which when combined with innovative methods could provide services to farmers that could not even be envisaged till yesterday. The customized and personalized advisory becomes especially important in the Indian context, where 72% of the population depends on agriculture but generates merely 13.9% of its Gross Domestic Product (GDP). With fragmented landholdings, the number of independent farmers has risen to 88 million with near-stagnant productivity. Growth-acceleration is possible only with customized advisory of various products that a farmer buys today helping him save money and buy a product more wisely. India currently has a billion strong mobile phone subscriber Base largely operating over voice oriented 2G,3G and 4G GSM (Global System for Mobile Communications) and GPRS (General Packet Radio Service) networks. With ever increasing rural mobile penetration, personalized agricultural advisory system is a real possibility. The paper presents an innovative technology which will be developed by combining internet, mobile and cloud applications together thus paving a way for a better future of farmers.

2. Literature Survey

Extracting Product Unit Attributes from Product Offers by Using Ontology. Andera Horch,Holger Kett and Antte Weisbecker Fraunhofer Institute for Industrial Engineering IAO Stuttgart, Germany[1]. According to2014: 264 million European e-shopper and 6, 45,000 retailers. Thereby there was huge number of products. Monitoring and comparing those products and

there prices thereby needed an automated system which was able to collect and analyze the data extracted from the Web. Very important attributes for comparing the products are their prices also the units and size attributes as weight, length and volume. Data is extracted from web and stored in query able XML .The ODE system extracts data according to their domain for identifying the query result the ODE searches the tree of the result page which has maximum correlation with domain ontology.

In the past several decades, a lot of research on helping the betterment of the farmers has been done in the literature.

In paper “Krishi-Bharati: An Interface for Indian Farmer” [2] studied that Nowadays, advancement of ICT make possible to retrieve almost any information from the global repository (internet). Farmers require information at the right stage of life cycle of farming to take right decision. Due to illiteracy they cannot get information. This paper states that user can interact with the system through the icons and result back with their intended agricultural information in Indian language text and spoken forms both. After selecting the icons, the icon to natural language generation module convert the selected icons to text in Indian language. Then keyword extractor module extracts the proper Indian language query [keyword] from that text .

In paper “Krishi-Mitra: Expert System for Farmers”[3] we studied that main aim behind this is that people in rural areas are far away from Internet technology, so get collectively information to farmers about crop, here made an one interface. The semi-illiterate people can get the information in Marathi and English language. In this it contains iconic based interface as well as information in speech format. Also that is audio clip. Also if he has some other queries, he can directly contact to expert calling.

In paper “Icon Based Information Retrieval and Disease Identification in Agriculture” [4] Most of farmer are illiterate that’s why they are not able to use internet for possible remedies of their infected crops. This paper discusses mainly two features one with an iconic interface where farmer can interact easily and in return system will return in native language. Another feature is an image processing technique in that farmer has to upload image of diseased crops and result will show disease name and possible solution for infected crop.

In paper “Enhancement in Agro Expert System for Rice Crop” [5] some farmers don’t have enough knowledge to identify exact diseases on crop by analyzing symptom on crop. The main point of study in system is that system background starts with by analyzing the number of disease symptoms of the rice plant appearing during the life cycle of plant and then the collected knowledge viewed to develop an expert system.

In paper “A Model for Enhancing Empowerment in Farmers is using Mobile Based information system” [6] states that farmers which are living in villages rural areas do not have proper access of information to make decisions related to farming, they use mobile phones to communicate using internet. It provides personalized information with the aim of empowering them to make appropriate decision and actions.

3. System Architecture

Retailers will be given User id and password. They will login into the websites whenever they want to update or change the information for e.g. when there is a massive price drop of the product. The retailer will login into the website and update the price of the respective product. As soon as the retailer makes any changes in his database, automatically the alert will be send to the users devices. The user will have to register him with the user id and password and also a photograph for the security reasons. In order to protect the privacy of user each and every time user logins the system will ask for the respective photograph. User will have to be careful in order to keep the photograph in his device whenever he wishes to use our application. Whenever the retailer updates the information the system will automatically compare the product with the respective products of other retailers and the products with respective to prices will appear in ascending order. Meanwhile the alert which is send on the users device will inform him the change in prices and when user will click on alert he will be redirected to the corresponding website.

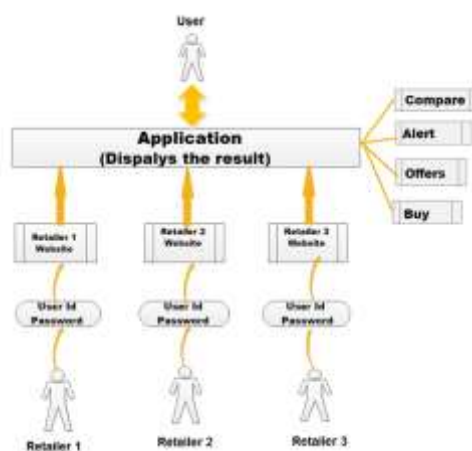
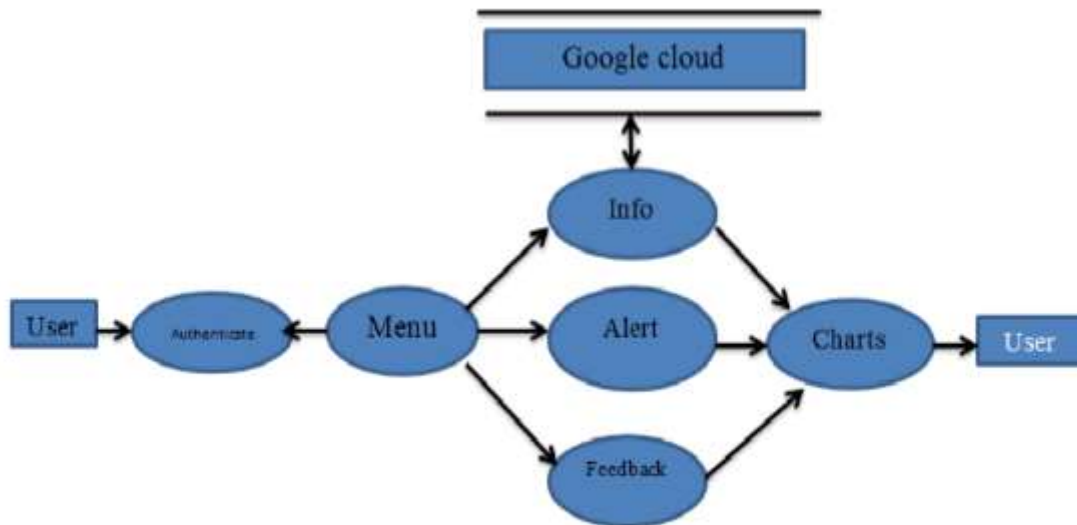


Fig. 1. System Architecture



Dig.1 Data Flow Diagram

4. EXISTING SYSTEM

There is no as such an existing system which uses the data on the cloud and apply data mining which will help them rank the products they buy. There is one application e-mandi which is under the banner of Indian government, where it works in similar fashion like showing up the rates of all crops all over the cities and also giving an idea about the rates to all farmers using that application.

There is an existing system like Policybazaar which compares various insurance plans present on various websites and suggest the best plans for users as per their need. They play a huge role in supporting families in distress will make it viable for every participant.

Even there is an application MySmartPrice which compares various products like electronic gadgets, clothing, etc. on the basis of prices from various other retailing websites like Snapdeal, Flipkart etc. and display the compared products in ascending order of their prices. MySmartPrice also included offline stores.

Trivago claims to be the world's largest online hotel search site, comparing rates from over 1 million hotels and more than 250 booking sites worldwide. This site includes over 190 million hotel ratings and 14 million photos and reports over 120 million visitors per month. Trivago search tool scans hotel booking sites for prices, availability, images and reviews within seconds. When user selects a hotel they are redirected to a partner website to complete the booking. It's a free app product of both iOS and Android. In addition to hotel search it provides interactive maps and displays accommodation in close proximity to the users current location.

5. ADVANTAGES

1. Easy access to store.
2. Updates the prices on daily basis.
3. Massive price drop alert.
4. Customer can demand for the products thereby providing COD.

6. CONCLUSION

Farming Being India's basic profession most of the people livelihood depends on farming. But the end of the year they end up with debts. Thus this is our little attempt to help them. We hope that our system will be beneficial for them to get the desired products at least prices at their doorstep.

7. REFERENCES

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