

An Application for E-Marketing of Agricultural Commodities and Analysis of Marketable Surplus

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Abstract: India is primarily an agrarian economy, but still Indian farmers continue to be among the poorest in the world. With presence of abundant raw materials in the form of natural resources, India lags far behind in ensuring food security for its own citizens. So, the aim behind developing this app is to give India's huge farming community a fair and consistent price for their produce. Farmers can directly connect with the end users and supply the product directly to them by using this app. This will increase the profit of the farmers and also end users can get good quality product in fewer prices as they will directly buy from farmers. This app will be providing the analysis on price trends which will be beneficial to farmers for marketing their commodities. Also, interface will be provided in Marathi language.

Keywords: Market Rate, Farmer/Customer, Regression analysis, Price analysis, Marathi Language

I. INTRODUCTION

The role that agriculture should play on economic development has been recognised for years. The adoption of new technologies designed to enhance farm output and income has received particular attention as a means to accelerate economic development. However, output growth is not only determined by technological innovations but also by the efficiency with which available technologies are used. The potential importance of efficiency as a means of fostering production has yielded a substantial number of studies focusing on agriculture. The rising cost of food that has hurt both Indian pockets and politicians' electoral prospects in the past year is often blamed on a multilayer system of middlemen involved in the distribution of produce from farm to folk. So project is to help farmers. Introduced in the 1960s, these legally-enshrined committees prohibit farmers from dealing directly with buyers and require them to sell to licensed middlemen. So the aim was to give India's huge farming community a fair and consistent price for their product. But over the years, the system has created several layers of intermediaries, which results in lengthening of the supply chain and increasing the opportunity for cartels to form, which in turn drive prices down for farmers and up for consumers. Removing fruits and vegetables from the control of these committees would allow the produce to find its true market value and damp down inflation, according to analysts India's poor infrastructure in crop producing regions also enables middlemen to deceive farmers as to the true value of the produce they are selling. Most of the warehouses are near the cities, increasing post-harvest losses through rotting. India is currently the world's second-largest producer of vegetables and the post-harvest losses are estimated at nearly 30%. Farmers have little option but to send their produce to urban markets as there are no warehouses close to their fields.

II. LITERATURE SURVEY

The condition of farmers in the State of Maharashtra today is very critical. Farmers fall into debts because they have to face various problems in selling their commodities in a profitable manner. This creates a vicious cycle and most of the time farmers suffer mental distress. Hence, we were motivated to help solve farmers' issues. In India 3/4th people rely on agriculture. There are many schemes available for farmers developed by the government. In our process of requirement gathering we came to know that farmers are not getting their fair prices for their produced commodities in market. The previous system included design of an android app which provides farmer login and gives detail information about vegetables and fruits available.

In order to get to know and understand the situations of the farmers living in rural areas we visited Wadeshwar village and carried out survey of farmers to know their situations and also condition of their Crops as well as how they sell their Goods in Market and their marketing strategies. We carried out survey and noted in survey form. The form contains different fields related to farmer's personal information, land area, marketing strategies etc. Thus through this survey we got to know about the real situation that farmers face various problems is agriculture and marketing of goods.

It was also come to know that maximum farmers in village faced problem due to lack of water resources which in turn lead to loss.

III. PROPOSED METHODOLOGY

Agro Mart is an Android Application that will help the farmers to perform the Business which will lead to achieve success and increase in their standard of living. The app will serve as a way for the farmers to sell their products just with some basic knowledge about how to use the Application. The Application will guide the farmers in all the aspects, the current market rate of different products and the earned profit for the sold products. We are also predicting which pairs of vegetables are bought frequently. Many farmers as well as common people are mostly not comfortable with English language so here we are providing Marathi language interface.

The project contains following modules as below:

FARMER-This module contains registration form through which farmers can register them and get their id and password. This id and password will be used to login to their account, through this account farmer can manage all the details of its added material. As farmer added the vegetables details using this app, the data will be added to the server and will be reflected to all the buyers accordingly. Different users can see and buy the vegetables directly from the farmers.

CONSUMER-In this module, the buyer will search and see the available vegetables and all the related details about vegetables updated by the farmers. Using this module people can also buy vegetables directly from the farmers by going to the farm. And also if merchandise wants to buy the vegetables in large quantity, they can buy it.

Thus, the main approach of this project is to eliminate middle man involvement that makes loss to the farmers. By using this system the main goal is to make sure that the farmer will get full profit of their product without bargaining with Agents.

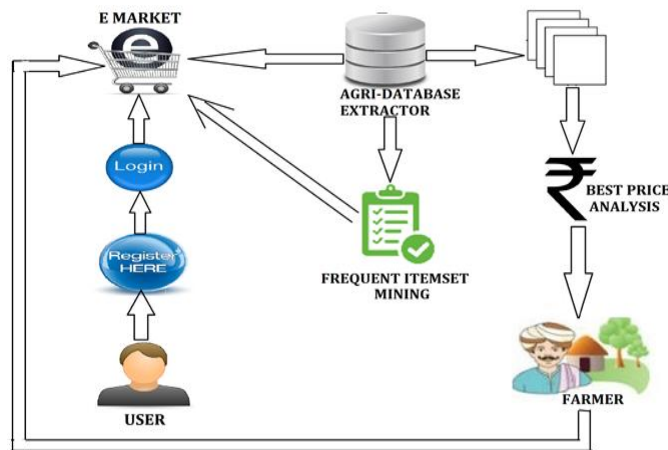


Fig.1 Architectural Diagram

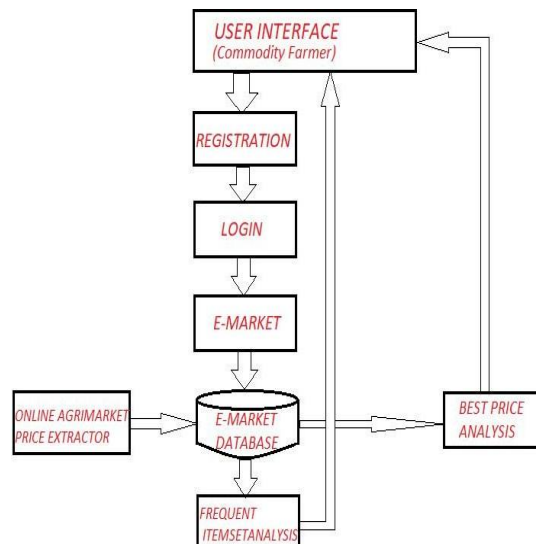


Fig.2 Block Diagram

IV. RESULT SET

Data set: We have used total 300 records for predicting price based on historical data. The dataset is collected by visiting Wadeshwar village by surveying as well as using following websites of Daily updates of Market price in Agricultural sector.

1. <http://agmarket.nic.in/agnew/NationalBEnglish/DatewiseCommodityReport.aspx?ss=1>
2. <http://market.todaypricerates.com/vegetables-daily-price>
3. <http://www.agmarknet.nic.in/agnew/NationalBEnglish/CommodityDailyStateWise.aspx?ss=2>
4. <http://agmarknet.gov.in/PriceAndArrivals/DatewiseCommodityReport.aspx>
5. <https://data.gov.in/sector/agriculture?page=1>

Table. I: Result Set

Day	Expected Outcome	Derived Outcome
Day 55	700	712
Day 15	700	735
Day 32	700	725
Day 10	700	738
Day 20	700	732
Day 50	700	715
Day 11	800	737
Day 16	800	734
Day 18	700	733
Day 9	700	718

True Value: 8

Wrong Value: 2

Total Value: 10

% Accuracy = (No. of correct prediction / Total No. of predictions) * 100 %
= $8/10 * 100$ %
= 80 %

V. FUTURE SCOPE

This application has ample of scope in future, as one can add various features in this application like add sound detection in login or design same app for multiple languages or create an app with online vegetables shop like other cloths sites. One can do as per their creative ideas.

VI. CONCLUSION

This application will be useful to farmers as well as community people. The profit of the farmers will be increased as they can sell their produce directly to the consumers and also end users will get good quality vegetables in low price. The system provides analysis of price of vegetables with accuracy of 80%. Hence, the analysis provided to the farmers will help them to understand at what price they should sell their produce so that they can get maximum profit.

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