QUALITATIVE AGRICULTURAL DATA ANALYSIS AND MANAGEMENT USING CLOUD COMPUTING

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ABSTRACT
. In a country like India, where much of the population depends on agriculture for survival, corps monitoring is critical and the demand for environmental monitoring and remote controlling in agriculture is rapidly growing. Manual method for purchasing agriculture crops is very time consuming process, both customer and farmer are not satisfied as intermediate person use all profit. Indian farmers are facing many problem because of lack IT infrastructure. Indian farmers use manual methods for cultivation as they do not know any innovative techniques. In existing system, most of buyers need to contact to the wholesalers, retailer shop, malls, and bazaars. There is no possibility for a buyer or purchaser to contact the farmer directly for the quality, price, quantity and availability .Also researcher cannot get the actual status all soil type, crops a time. *This paper discusses* selling of agriculture product online by using data mining techniques for knowledge based extraction of data

.In this farmer will upload his crop details and customer will get comparative output for respective crops. There is direct communication will take place between customer and farmer. Secondly, we are focusing on future crop production of respective farmer. For that SPSS Software is used to analyze last year data.

Keywords:- *Cloud computing, data mining, agricultural economy,spss technique.*

I. INTRODUCTION

Agriculture sector plays an important role in the overall growth of Indian economy. Today, India ranks second worldwide in Agriculture production. Most of the rural areas which depend on agriculture have lack of facilities of information technology. Many challenges have been faced by agriculture industry. In a country like India, where much of the population depends on agriculture for survival, corps monitoring is critical and the demand for environmental monitoring and remote controlling in agriculture is rapidly growing. In past the usage of Information technology is only in the hands of some higher sections of society, but in the current world it is in the hands of all at a lower cost and easy to use. Information communication and technology (ICT) plays vital role in bringing latest bulletins regarding weather reports, prices, usage fertilizer, sowing of crops etc., to farmers at rural areas.

However, there has been little research on sensor network applications for agriculture. An agricultural monitoring system provides monitoring services, and thus maintains the crop-growing environment in an optimal status. This system also improves the convenience and productivity of users. However, existing agricultural monitoring systems are mostly applied and utilized in closed agricultural environments such as greenhouses, cattle sheds, etc., as it is difficult to apply agricultural monitoring systems in outdoor locations because of lack of IT infrastructure. The productivity of agriculture is very low. So as the demand of food is increasing. The researchers, farmers, agricultural scientists and government are trying to put extra effort and techniques for more production .In addition, when a user want to verify the monitored information in an existing monitoring system, the user must manually check the status through installed sensors or terminals installed in the agriculture facilities.

Data mining is an emerging technology which plays vital role in almost every sector.. By performing linear regression analysis using SPSS software previous years data which will provide possible future production of crops. Farmers can get most up-to-date information about the crop production. The agricultural information system provides its users to get online information about the crop, statistical details and new tendencies. The trends of the crops act so that these will be pretty important to the users who access these via the Internet. The main features of the information system includes information retrieval facilities for users from anywhere in the form of obtaining statistical information about fertilizer, quantity available, price, suitable soil concentration for the corresponding crops and etc.

In this thesis, we have to mainly focus on selling of agriculture product online by using data mining techniques for knowledge based extraction of data.In this farmer will upload his crop details and customer will get comparative output for respective crops. There is direct communication will take place between customer and farmer. Secondly, we are focusing on future crop production of

respective farmer. For that SPSS Software is used to analyze last year data.

I.   LITERATURE REVIEW

[1]Tuli, A; Hasteer, N; Sharma M; Bansal A   discussed about cloud deployment model, which provides information related to agriculture to the farmer living in the rural   area,   Facing financial   and connectivity   constraints.   The   model leverages   the   existing   Government services and mobile service to provide a solution   to   existing   scenario   with minimum   burden   on   farmer's   pocket. However, this model is only concentrating providing information to the farmer facing financial   problem.   Other   problems   like less   productivity   of   crops,   selling   of product cannot be resolved by this model.

[3]Shitala Prasad, Sateesh K. Peddoju and Debashis Ghosh ,disscused a new research activity   in   field   of   Mobile   Cloud Computing   (MCC)   in   farmer's perspective. The proposed framework for farmers especially the Indian farmers to assist them in agricultural needs, presented a new way of interaction to a botanical species recognition and disease detection using a simple mobile phone with camera– a Mobile Vision. AgroMobile is aimed to utilize   all   the   advantages   of   cloud computing   technologies   on   to   a   simple mobile   device   particularly   the   mobile phones,   reducing   the   workload   on   the farmer's devices and running the complex algorithms   like   high-level   image processing   on   the   cloud   server. Phones having other than Android OS as platform cannot use this application.

[4]Mr.   Mahesh D. S, Ms.   Savitha S, Dr. Dinesh K. Anvekar discussed WSAN and Cloud   services   in   agricultural   field provides high potential benefits which are economically   worth   in   the   field   of agriculture. In this paper we have proposed and outline an agricultural WSAN Cloud for providing assistance to farmers during crop cultivation. Farmers can receive at an affordable price the information about soil condition,   crop   cultivation   environment, crop diseases, and pricing solutions during cultivation through the expertise available in a cloud computing system. As a part of future   work,   a   prototype   model   of   the system is planned.

[9]Dehua Zhang , studied the influencing factors on farmers' income in Heilongjiang which   has   a   strong   practical   guiding significance.   It   has   some   practical significance   to   ensure   national   food security,   increase   farmers'   income   and maintain   social   stability.   Based   on   the analysis   of   single   factor   from   previous studies,   the   paper   attempts   to   study   more factors comprehensively and finds the main influencing factors by using multiple linear regression method. Its drawback is that   the   factors   influencing   farmers' income is very complex, the paper can only   choose   some   relatively   important factors to analyze.

II.   PROPOSED APPROACH

The   main   research   aims   towards following aspect

1.   Design of a cloud-based trading system   that   disseminates information crop status, harvesting times, and market prices.

2. Smartness comes with optimization, flexibility, predictability by using cloud in agriculture sector

3. An application will cater to all such information needs of an Indian farmer at a very reasonable and affordable cost.

4. Internet of Things has a huge potential in the agriculture field It gives plants a tongue to speak to us

By using cloud computing we can list out its role in agricultural development in India. Using the applications of cloud the farmers have nothing to worry about hardware and software investment and also the technical knowledge required to learn them. The farmers will send the request for the specific cloud service using a user friendly device, and the cloud service provider will analyze and handle the request dynamically, and finally the results will be passed back to the client [8].

. Manual method for purchasing agriculture crops is very time consuming process, both customer and farmer are not satisfied as intermediate person use all profit. Indian farmers use manual methods for cultivation as they do not know any innovative techniques. In existing system, most of buyers need to contact to the wholesalers, retailer shop, malls, and bazaars. There is no possibility for a buyer or purchaser to contact the farmer directly for the quality, price, quantity and availability .Also researcher cannot get the actual status all soil type, crops a time.

The main objective of this proposal is to introduce an agricultural information system for the major crops. Remote access to this system to be provided through the internet. Our work aims at developing a reliable system for obtaining the information about agriculture field for detecting various problems related to the agriculture and farmer-customer communication.

This Information System provides the external users the ability to obtain summarized Information in a preferred format .It also provide facility to update the database though the Internet. This system provide facility to updating database by computing proficient as well as non computing proficient. This provides easy access to the database for all type of data manipulation. Security of the database is ensured by the use of a password for updating purposes.

SPSS Software

SPSS (Statistical Package for Social Science) is widely used for Statistical analysis. SPSS can read a variety of data formats, including data files saved in SPSS format, SAS datasets, database tables from many database sources, Excel and other spreadsheets, and text data files with both simple and complex structures used to generate tabulated reports, charts and plots of distribution and trends. SPSS data file can contain more than simple data values. The SPSS dictionary can contain a variety of metadata attributes, including measurement level, display format,

descriptive variable, and value labels, and special codes for missing values. You can perform different functionality for analysis, to more advanced tasks.

The many features of SPSS statistics are accessible via pull down approach. Command syntax programming has the benefits of reproducibility, simplifying repetitive tasks, and handling complex data manipulation and analysis. SPSS is a comprehensive and flexible statistical analysis and data management solution. SPSS can take data from almost any type of file and use them to generate tabulated reports, charts and plot of distributions and trends, descriptive statistics and conduct complex statistical analyses. SPSS is available from several platform; Windows, Macintosh, and UNIX systems.

In SPSS Linear Regression command calculates multiple regression equations and associated statistics and plots. Linear Regression also calculates co linearity diagnostics, predicted values, residuals, measures of fit and influence, and several statistics based on these measures. Linear Regression analysis finds relationship between independent and dependent variables.

As a result of using SPSS Software for Agriculture field, agriculture field can:

• Identify which factors are likely to increase the production of crops.

• Develop a strategy for each different factor which are used for production.

• Compare the effectiveness of factors.

• Using mostly those factors efficiently which boost profits and reduce costs of production.

• Plans to increase the concentration of soil.

VI. CONCLUSION & FUTURE SCOPE

In this project, we are focusing on developing a user friendly agricultural Information System for the World Wide Web. Researchers will have access to up to date information. In addition to that all the major Institute
should be provided with internet access and the necessary
human recourse personals to make this project a reality.There is direct communication between farmer and purchaser so it eliminate the need of intermediate which takes most of the profit The selling of agriculture product online will be helpful.Customer will get the comparative crops details. This system will also provide analysis of uploaded crop to predict the future output crop production. Thisproject under implementation and work is under process.

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