

ONLINE FARMER OPD BY USING IOT AND MACHINE LEARNING

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Abstract: This work aims to show how to manage heterogeneous information and data coming from real datasets that collect physical, biological, and sensory values. As productive companies—public or private, large or small—need increasing profitability with costs reduction, discovering appropriate ways to exploit data that are continuously recorded and made available can be the right choice to achieve these goals. The agricultural field is only apparently refractory to the digital technology and the “smart farm” model is increasingly widespread by exploiting the Internet of Things (IoT) paradigm applied to environmental and historical information through time-series. The focus of this study is the design and deployment of practical tasks, ranging from crop harvest forecasting to missing or wrong sensors data reconstruction, exploiting and comparing various machine learning techniques to suggest toward which direction to employ efforts and investments. The results of related work till now show how there are ample margins for innovation while supporting requests and needs coming from companies that wish to employ a sustainable and optimized agriculture industrial business, investing not only in technology, but also in the knowledge and in skilled workforce required to take the best out of it.

Keywords: Crop Prediction, IOT, Temperature Sensor, Java, Android etc

I INTRODUCTION

Agriculture field is the backbone of any country. Agriculture supplies the food and raw materials to the people in country. It is the only income source of many peoples. Peoples who belongs with agriculture field faces many problems such as decreasing production due to unsuitable climatic changes, flood, dearth and many other natural reasons and rarely factors. They are unable to do agriculture due to this reasons. We can use Information Technology (IT) to overcome this problem. In today's life Information Technology is used in every field worldwide. The Data Mining is a part of IT which we can use to solve agriculture problems mentioned above. The basic idea of the Data Mining is that it generates useful information by extracting from large datasets. To be more accurate, it is a technique of extracting useful information from large amount of data. It is the practice of automatically searching large stores of data to discover associations and trends that go beyond simple analysis. Data mining can answer questions that cannot be addressed through simple query and reporting techniques. In this project, we present a system that can be used to decide the suitable crop for sowing. We are using the web based system to extract the required result from web. We are using Weather Forecast Report, Soil and Land use survey of India, Soil Report survey, crop survey as databases. System for Agriculture Recommendation using Data Mining is based on the following steps:

1. Registration of a farmer to the system. This registration can contain his username, password, name, address, land details like Altitude, Latitude and Longitude, contact information such as phone number and mailing address.

II. LITERATURE SURVEY:

Qualitative data analysis using regression method for agricultural data

Pallavi V. Jirapure ; Prarthana A. Deshkar

Published in: 2016 World Conference on Futuristic Trends in Research and Innovation for Social Welfare (Startup Conclave)

The focus of this paper is to provide and build agricultural based information system for Customer and Farmer interaction where scalability, reliability and integrity of information can be access through cloud based technology. This paper aims to analyze and use data mining techniques specially Regression analysis to forecast the crop production. The forecasting of respective crops analyzes patterns in knowledge lie information of certain parameters and historical data.

A survey on application of data mining techniques to analyze the soil for agricultural purpose

N. Hemageetha

Published in: 2016 3rd International Conference on Computing for Sustainable Global Development (INDIACom)

This paper explores various proposed algorithms for analyzing soil using data mining techniques.

Research on predicting agricultural drought based on fuzzy set and R/S analysis model

Xin Huang ; Hong-liang Li ; Lin Qiu

Published in: 2010 3rd International Conference on Advanced Computer Theory and Engineering(ICACTE)

This paper establishes the predicting model to research on time series data mining of rainfall, then predicting the years of occurrence of agricultural drought. The result of application in Puyang irrigation area which is in Henan Province shows that the model is convenient and current, and is authentically feasible in the application of forecasting the years of occurrence of agricultural drought, which makes a guidance effect in agricultural production.

The design of algorithm for data mining system used for Web Service

Ren Yanna ; Lv Suhong ; Wang Qiang

Published in: 2011 IEEE 3rd International Conference on Communication Software and Networks

This paper just analyses the major problems of algorithm library of data mining system in customization, sharing and dynamic maintenance and builds the basic framework of algorithms library module in data mining system. It also studies the description of the primary metadata in data mining algorithm as well as designs and materializes the formation of algorithms library management module and dynamic interface in data mining system.

A study on crop yield forecasting using classification techniques

R. Sujatha ; P. Isakki

Published in: 2016 International Conference on Computing Technologies and Intelligent Data Engineering (ICCTIDE'16)

In this paper, we have demonstrated to estimate the crop yield, choose the most excellent crop, thereby improves the value and gain of the farming area using data mining techniques.

III PROPOSED SYSTEM:

Our proposed system will have three modules:

- Farmer
- Consultant (Expert)
- Admin
- Back End (Data Mining)

Admin:

- Admin is having pre-defined username and password.

- Admin can log in to the system and can add the consultant.
- Admin will assign username and password to consultant.
- Admin will have other general rights as to view number of users, their details, etc.

Consultant:

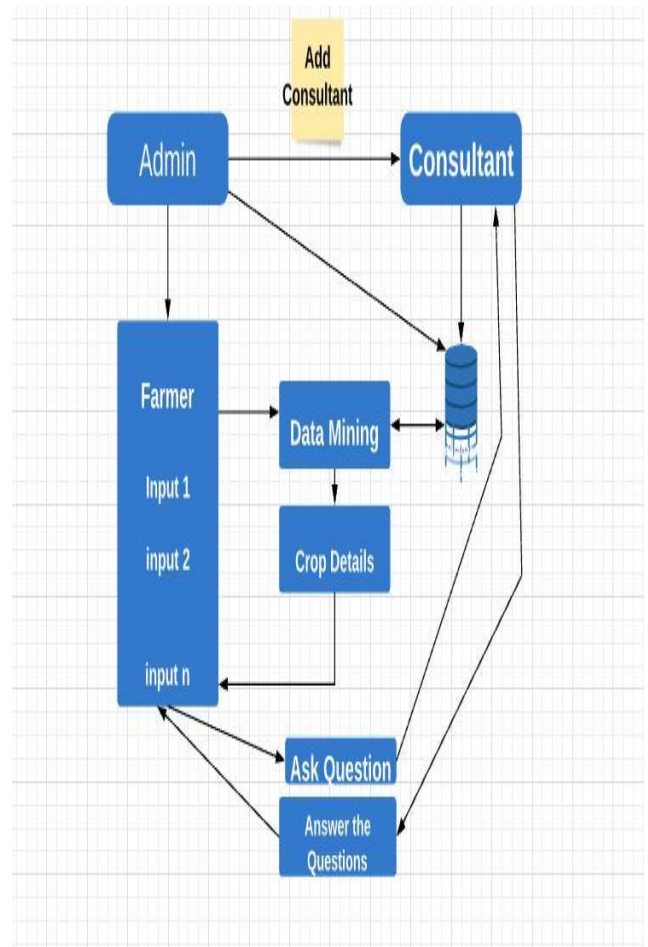
- Consultant is the expert in agricultural field .
- Consultant will resolve the queries of the farmer in his area.

Farmer:

- Anyone can register and can become a part of the system as a farmer.
- Farmer have to fill up one form after registration with the details like environmental factors, his last crop, his area, and some other parameters.

Back End:

- The parameters entered by farmer will be compared with the predefined parameters and the system will give the suggestions to the farmer about which crop will be most suitable considering his geographical area and environmental parameters.



IV EXPERIMENTAL RESULTS:

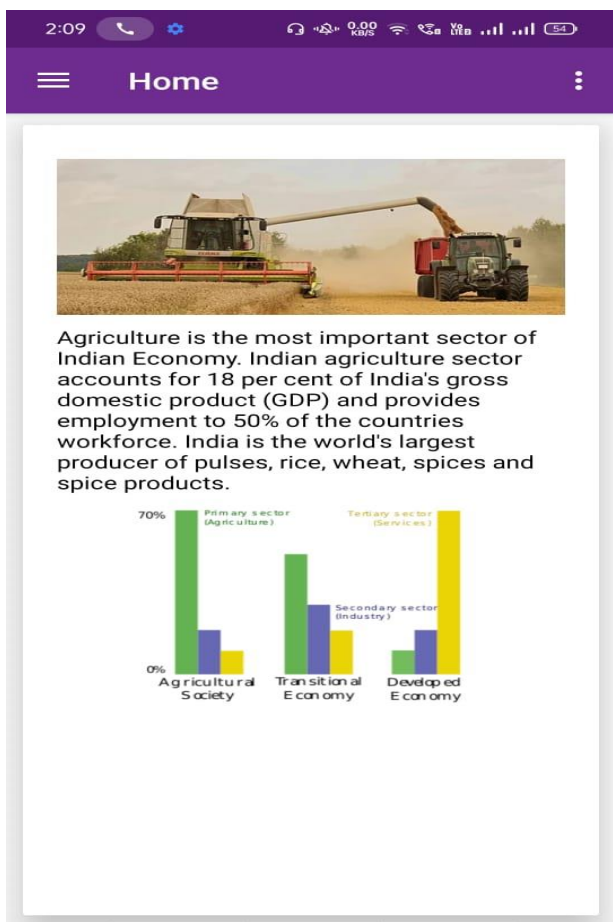


Fig: Famer Login

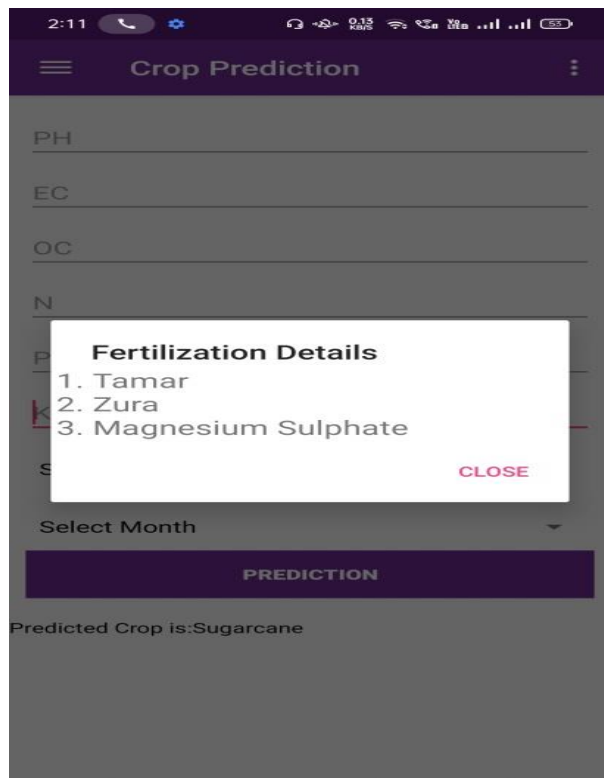


Fig: Suggestion

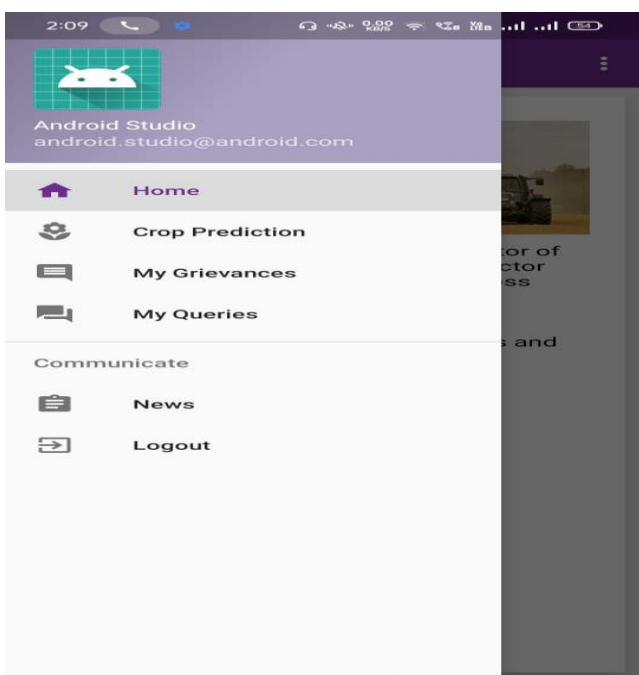


Fig: Farmer Home



Fig: Hardware Implementation

V CONCLUSION:

In conclusion we can say that if perfect crop recommendations are given to farmers it will definitely help to increase the crop yield and also in building the economic status of agricultural dependent countries.

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