Scientific Journal of Impact Factor (SJIF): 5.71

e-ISSN (O): 2348-4470
p-ISSN (P): 2348-6406

International Journal of Advance Engineering and Research Development

Volume 5, Issue 10, October -2018

# "CROP DISEASE PREDICTION"

[1]Shaikh Faiza, [2]Sayed Marziya, [3]Momin Nausin

[1,2,3] *Students of Department of Computer Engineering, Jaihind COE, Kuran, Pune*

**Abstract:** *Data mining and machine gaining knowledge of is an emerging field of research in facts era in addition to in agriculture. Agrarian sector is facing rigorous trouble to maximize the crop productiveness. The present have a look at makes a specialty of the packages of data mining strategies in crop sickness prediction in the face of climatic trade to assist the farmer in taking choice for farming and accomplishing the predicted monetary go back. The Crop disease prediction is a prime hassle that may be solved based totally on available data. Data mining strategies are the better selections for this purpose. Exclusive data mining techniques are used and evaluated in agriculture for estimating the future year's crop production. The main cause of the gadget is for social use. Farmer has to face many troubles like lack of know-how, Manures, fertilizers and Agriculture marketing etc. gift method SAR Tomography takes the photographs and gives the exceptional development stages of crop. This system not gives the fertilizers and precautions to the farmer. This paper gives quick analysis of crop disease prediction the usage of k Nearest Neighbor class approach and Density based clustering approach for the chosen place. The styles of crop production in response to the climatic (rainfall, temperature, relative humidity and sunshine) impact across the selected regions are being evolved using ok Nearest Neighbor technique. For that reason it is going to be useful if farmers should use the technique to are expecting the future crop productivity and therefore adopt opportunity adaptive measures to maximize yield if the predictions fall below expectations and business viability.*

***Keywords***: *Data mining, Machine Learning, Classification, Clustering.*

## I. INTRODUCTION

Crop prediction is the art of predicting crop yields and manufacturing earlier than the harvest virtually takes area, usually more than one month earlier. Crop forecasting is based on computer programs that describe the plant surroundings interactions in quantitative terms. The soil testing program starts with the collection of a soil sample from afield. the primary principle of soil testing is that a discipline may be sampled in such a way that chemical evaluation of the soil pattern will correctly reflect the sphere's authentic nutrient fame. The motive of soil trying out in excessive-yield farming is to decide the relative potential of a soil to supply crop nutrients all through a selected growing season, to decide the wishes, and for diagnosing issues which include excessive salinity or alkalinity. Soil checking out is likewise used to manual nutrient management choices related to manure and sludge utility with the objective of maximizing economic/agronomic benefits whilst minimizing the ability for negative effects on water fine. Data mining is a technique of extracting hidden information from a database and transforms it into an understandable shape for further use. Its miles the computational technique of coming across styles in massive information sets related to strategies at the intersection of synthetic intelligence, machine learning, records, and database systems. The remaining intention of data mining is prediction - and predictive records mining is the most commonplace form of information mining and one that has the maximum direct commercial enterprise programs. For the duration of the years, many algorithms have been created to extract know-how from huge units of statistics. There are numerous distinctive methodologies to approach this problem: category, affiliation rule, clustering, etc. right here we are able to awareness on category technique. Class strategies are designed for classifying unknown samples the usage of information provided by using a fixed of categorized samples.
This set is normally referred to as a training set, due to the fact, in well-known; it is used to teach the category approach how to perform its category. The class venture may be visible as a supervised technique in which each example belongs to a class, that is indicated by means of the value of a unique aim characteristic or sincerely the elegance attributes. type exercises with statistics mining use a diffusion of algorithms and the precise set of rules used can affect the manner records are categorized. This work talks approximately choice Tree classifier assumes that the presence (or absence) of a particular function of a class is unrelated to the presence (or absence) of another feature. Depending on the precise nature of the probability version, ok Nearest Neighbor (kNN) and Density based totally clustering can be skilled very successfully in a supervised learning placing.

## II. PROBLEM STATEMENT

### 1. Problem Statement:

Data mining is an emerging field of research in Information Technology as well as in agriculture. Agrarian sector in India is facing rigorous problem to maximize the crop productivity. The present study focuses on the applications of data mining techniques in yield prediction in the face of climatic change to help the farmer in taking decision for farming and achieving the expected economic return. The problem of yield as well as disease prediction is a major problem that can

 

be solved based on available data. Hence we proposed an system Prediction of "Disease Prediction as per Weather Condition".

**2. Goals & Objectives:**

- To predict whether before sowing crop.
- Prediction the disease before the sowing crop(using the whether condition)
- To provide precaution and fertilizer recommendation.
- To analyze the disease at post condition using SIFT algorithm.
- To reduce productivity/production cost and increase income.
- To reduce fertilizers on crop.

## III. PROPOSED SYSTEM

The preparation of soil is step one before developing a crop. One of the maximum crucial responsibilities in agricultural is to show the soil and unfasten it. This permits the roots to penetrate deep into the soil. The loose soil permits the roots to respire effortlessly even if they go deep into the soil. The loosened soil facilitates in the increase of earthworm and microbes gift inside the soil. Those organisms are pals of the farmer when you consider that they in addition turn and free the soil and upload humus to it.

Here we're the usage of sensors values like soil moisture sensor, temp sensor, humidity. In this work the experiments are done crucial and widely known type algorithms ok Nearest Neighbor (kNN) and Density based clustering are implemented to the dataset. There accuracy is acquired by comparing the datasets. Every set of rules has been run over the training dataset and their overall performance in phrases of accuracy is evaluated together with the prediction executed inside the trying out dataset. The entire analysis method creates a facts go with the flow.

### A. SYSTEM ARCHITECTURE

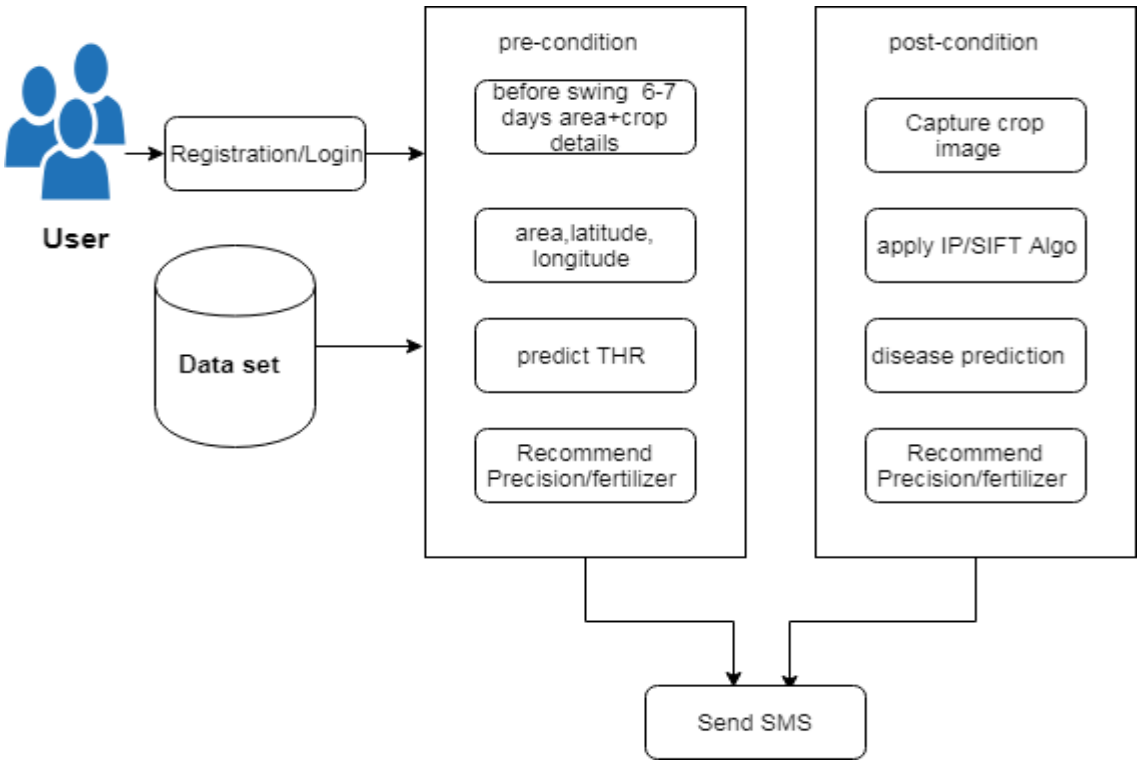


Fig.: System Architecture

### B. REQUIREMENTS SOFTWARE AND HARDWARE:

**Hardware Requirements Specification:**

There should be required devices to interact with software.

- System : Pentium IV 2.4 GHz.
- Hard Disk : 40 GB.
- Ram : 256 Mb.

 

**Software Requirements Specification:**

- Operating system : Windows XP/7.
- Coding Language : JAVA
- IDE : Java eclipse
- Web server : Apache Tomcat 7.

## IV. CONCLUSION AND FUTURE WORK

This machine focuses on developing automated leaf sicknesses. It saves time and effort, on this undertaking; we've got proposed a brand new method for prediction of crop ailment from modern-day weather the use of Google API with the help of k-NN set of rules and measuring the crop sicknesses of the crop item and locate climate prediction.
In this work the experiments are achieved two essential and widely known category algorithms k-Nearest Neighbor (k-NN) and Density primarily based clustering are applied to the dataset. There accuracy is received through evaluating the datasets. Every set of rules has been run over the schooling dataset and their performance in terms of accuracy is evaluated at the side of the prediction completed in the trying out dataset. The complete analysis procedure creates a data flow.

## ACKNOWLEDGMENT

To develop a Disease Prediction as per Weather Condition and Market Analysis that accurately updates databases according to the weights of goods and maintains transparency in the system and prevents forgery and exploitation of masses caused by consumer.

## REFERENCES

[1] Adams, R., Fleming, R., Chang, C., McCarl, B., and Rosenzweig, 1993—A Reassessment of the Economic Effects of Global Climate Change on U.S. Agriculture, Unpublished: September.
[2] Adams, R.,Glyer, D., and McCarl, B. 1989. "The Economic Effects of Climate Change on U. S. Agriculture: A Preliminary Assessment." In Smith, J., and Tirpak, D.,eds., The Potential Effects of Global Climate Change on the United States. Washington, D.C.: USEPA.
[3] Adams, R.,Rosenzweig, C., Peart, R., Ritchie, J., McCarl,B., Glyer, D., Curry, B., Jones, J., Boote, K., and Allen, H.1990."Global Climate Change and U. S. Agriculture."Nature.345 (6272, May): 219-224.
[4] Adaptation to Climate Change Issues of Longrun Sustainability." *An Economic Research*
[5] Barron, E. J. 1995."Advances in Predicting Global Warming‖.The Bridge (National Academy of Engineering). 25 (2, Summer): 10-15.
[6] Barua, D. N. 2008. Science and Practice in Tea Culture,second ed. Tea Research Association, Calcutta-Jorhat,India.
[7] Basu, Majumder, A., Bera, B. and Rajan, A. 2010. Teastatistics: Global scenario. *Int. J. Tea Sci*.**8**: 121-124.
[8] Bazzaz, A., and Fajer, E. D. 1992. "Plant Life in a CO2Rich World. "Scientific American. 1821.
[9] Brack, D. and M. Grubb. 1996. Climate Change, "ASummary of the Second Assessment Report of the IPCC."FEEM (Fondazione ENI Enrico Mattei, Milano Italy)newsletter, 3, 1996
[10] M.Soundarya, R.Balakrishnan," Survey on Classification Techniques in Data mining", International Journal of Advanced Research in Computerand Communication Engineering Vol. 3, Issue 7, July 2014.
[11] D Ramesh , B Vishnu Vardhan, "Data mining technique and applications to agriculture yield data", International Journal of Advanced Researchin Computer and Communication Engineering Vol. 2, Issue 9, September 2013 .
[12] Gideon O Adeoye, Akinola A Agboola, "Critical levels for soil pH, available P, K, Zn and Mn and maize ear-leaf content of P, Cu and Mn insedimentary soils of South- Western Nigeria", Nutrient Cycling in Agroeco systems, Volume 6, Issue 1, pp 65-71, February 1985.
[13] D. Almaliotis, D. Velemis, S. Bladenopoulou, N. Karapetsas, "Appricot yield in relation to leaf nutrient levels in Northern Greece", ISHS ActaHorticulturae 701: XII International Symposium on Apricot Culture and Decline.

 