

Literature Review

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Some of the existing solutions

[1] Crop Yield Prediction Using Machine Learning : A research group investigated the utilization of various information mining methods which will foresee rice crop yield for the data collected from the state of Maharashtra, India. A total of 27 regions of Maharashtra were selected for the assessment and the data was collected related to the principle rice crop yield influencing parameters such as different atmospheric conditions and various harvest parameters i.e Precipitation rate, minimum, average, maximum and most extreme temperature, reference trim cultivable area, evapotranspiration, and yield for the season between June to November referred as Kharif, for the years 1998 to 2002 from the open source, Indian Administration records. WEKA a Java based dialect programming for less challenging assistance with information data sets, assigning design outcomes tool was applied for dataset processing and the overall methodology of the study includes, (1) pre-processing of dataset (2) Building the prediction model utilizing WEKA and (3) Analyzing the outcomes. Cross validation study is carried out to scrutinize how a predictable information mining method will execute on an ambiguous dataset. Study applied 10-fold higher cross validation study design to assess the data subsets for screening and testing. Identified and collected information was randomly distributed into 10 sections where in one data section was used for testing while all other data sections were utilized for the preparation information. Study reported that the method applied was supportive in the precise estimation of rice crop yield for the state of

P. Priya et al., (2018) has proposed a random Forest Algorithm for predicting the crop yield of particular area considering various parameters such as rainfall, seasonal crop (Rabi and Kharif) district-wise, temperature (max.), crop production in terms of Kgs/tonnes. Area for doing research was Tamil Nadu. Dataset record were collected from Indian Government over 15 years for rice production. They proved in experimental results that prediction analysis done using Random Forest Algorithm – a supervised machine learning algorithm will help farmer to predict the yield of the crop before cultivating onto the agricultural field. This algorithm run efficiently on large databases with high classification accuracy.

[2] Crop Yield Prediction Using Data Mining Techniques : Raorane A.A. and Kul karni R.V., discussed few data mining techniques in their paper. They concluded that efficient technique can be developed and analyzed using the appropriate data, to solve complex agricultural problems using data mining techniques. Also recommend some of the algorithms and statistical methods that give [8] good results in agriculture growth.

[3] Crop yield prediction using Big Data Analytics : In India crop yield is season dependent and majorly influenced by the biological and economic causes of an individual crop. Reporting of progressive agricultural yield in all the seasons is an ample task and an advantageous task for every nation with respect to assesses the overall crop yield prediction and estimation. At present a common issue worldwide is, farmers are stressed in producing higher crop yield due to the influence of unpredictable climatic changes and significant reduction of water resource worldwide. A study was carried out to collect the data on world climatic changes and the available water resources which can be used to encourage advanced and novel approaches such as big data analytics to retrieve the information of the previous results to the crop yield prediction and estimation. Study imported that the selection and usage of the most desirable crop according to the existing conditions, support to achieve the higher and enhanced crop yield

S. Athmaja, M. Hanumanthappa, and V. Kavitha, a survey of machine learning algorithms has presented effective strategies by for big data analytics. All over the world the agricultural peoples gained some advantages through the comparative knowledge from big data analysis, with machine learning algorithm by using huge data the agricultural peoples get some comparative knowledge and changes in regular agriculture.