CROP YIELD ANALYSIS

TITLE **:** An Experimental Analysis of Crop Yield Prediction Using Modified Deep Learning Strategy.

AUTHOR : P.Shyamala Bharathi, V.Amudha, G.Ramkumar

YEAR **:** 2022

ABSTRACT **:** Agriculture is the most significant and important backbone to the country's economy and as compare to other countries Indian civilization depends this agricultural field a lot. Different climate conditions such as rainfall, temperature, humidity levels, pesticide problems and so on need to be monitored continuously to maintain the agricultural field in good manner. Now-a-days, there are lots of Artificial Intelligence assisted technologies are available to predict the climate conditions and report it properly to the respective user. In this paper, a novel deep learning strategy is designed to support agricultural field to predict the crop yield level in fine manner, in which the proposed learning scheme is called as Modified Deep Learning Strategy (MDLS). This MDLS is derived from the conventional learning schemes called K-Nearest Neighbor and the Decision Tree Algorithms. The proposed approach consider the parameters such as rainfall ratio, pesticide usage and the weather conditions like temperature level as the prediction constraints to analyze the crop yield nature. The resulting section shows the proper efficiency ratio of all the mentioned algorithms in clear manner with graphical representations. A novel crop yield prediction dataset is considered to estimate the prediction level of crops, in which it is obtained from the open source database called Kaggle. The performance evaluation of the proposed approach is portrayed in the resulting section as well as it is cross-validated with the conventional learning schemes called k-Nearest Neighbor and the Decision Tree algorithms to prove the efficiency of the proposed approach called Modified Deep Learning Strategy.

TITLE : Crop Yield Prediction Using Machine Learning Algorithm.

AUTHOR : Ranjani J , V.K.G. Kalaiselvi , A.Sheela

YEAR : 2022

ABSTRACT : Agriculture is the backbone of the Indian economy, with more than half of the country's people relying on it for subsistence. Crop production is predicted using machine learning techniques based on parameters such as rainfall, crop, and meteorological conditions. The most popular and powerful supervised machine learning algorithm, Random Forest, can do both classification and regression tasks. They are used in crop selection to reduce crop yield output losses, regardless of the distracting environment. Weather, climate, and other related environmental elements have posed a significant danger to agriculture's long-term viability. Machine learning (ML) is significant since it offers a decision-support tool for Crop Yield Prediction (CYP), which may help with decisions like which crops to cultivate and what to do during the crop's growing season. Crop yield estimation's major purpose is to boost agricultural crop production, and it does so using a variety of well-established models. Machine learning is increasingly widely used around the world due to its success in a range of disciplines such as forecasting, fault detection, pattern identification, and so on. A key agricultural concern is a yield prediction. Farmers will be able to determine the yield of their crop before growing on the agricultural field using the results of this study, allowing them to make informed decisions. To assist farmers in maximizing agricultural yield, timely instructions to forecast future crop output and analysis are required.

TITLE : Design And Implementation Of Crop Yield Prediction Model In Agriculture.

AUTHOR : Sangeetha , Shruthi G

YEAR : 2020

ABSTRACT : Agriculture is the best utility region especially inside the developing worldwide areas like India. Usage of records age in agriculture can substitute the circumstance of decision making and Farmers can yield in higher manner. About portion of the number of inhabitants in India relies upon on farming for its occupation however its commitment towards the GDP of India is just 14 percent. One suitable explanation behind this is the deficiency of adequate decision making by farmers on yield prediction. There isn't any framework in location to suggest farmer what plants to grow. The proposed machine learning approach aims at predicting the best yielded crop for a particular region by analyzing various atmospheric factors like rainfall, temperature, humidity etc., and land factors like soil pH, soil type including past records of crops grown. Finally our system is expected to predict the best yield based on dataset we have collected.

TITLE : Crop Yield Prediction Using Data Analytics and Hybrid Approach.

AUTH0R : Shreya V. Bhosale , Prasanna G. Dhemey , Anagha N. Chaudhari

YEAR : 2018

ABSTARCT : Agricultural data is being produced constantly and enourmosly. As a result, agricultural data has come in the era of big data. Smart technologies contribute in data collection using electronic devices. In our project we are going to analyse and mine this agricultural data to get useful results using technologies like data analytics and machine learning and this result will be given to farmers for better crop yield in terms of efficiency and productivity.

TITLE : Prediction of Crop Yield Using Machine Learning

AUTHOR : Mohammed Ali Shaik , Geetha Manoharan, B. Prashanth, Nune Akhil.

YEAR : 2022

ABSTRACT : Farming is the major work which is considered as a culture instead like job and farming is the back bone of our economy as farming is the means which carried forth human advancement. India is nation which shows more interest towards farming and also grows all types of crops and its economy generally dependent on harvest profitability. Subsequently we can say that agriculture is major support for all business in our nation. Choosing of each harvest is significant in the choosing as each and every state in India grow various crop and the climate also varies from state to state. The choice of crop will depend on the various factors like, value of the crop, price given by the government, weather conditions and the price given by the private market buyers. Numerous progressions are needed in the field of agriculture to improve the benefit to Indian economy. We can improve agriculture by implementing AI mechanisms which can be same are defficiently on various cultivating areas. With all the advancements in the areas of machines and their improvements we can use them in cultivating the valuable and detailed data concerning various issues in addition to assuming the critical part in it. This paper helps use to getting an idea towards executing all the harvest based strategy with the ambitious techniques that helps in enchanting the maintenance of numerous agriculture and agriculture field issues. This helps the farmers to choose a best crop which helps them getting profit and also helps to increase our nation's economy.

TITLE : Prediction of Crop Yield Using Big Data

AUTHOR : Wu Fan , Chen Chong, Guo Xiaoling ,Yu Hua

YEAR : 2016

ABSTRACT : Quantifying the yield is essential to optimize policies to ensure food security. This paper aims at providing a new method to predict the crop yield based on big-data analysis technology, which differs with traditional methods in the structure of handling data and in the means of modeling. Firstly, the method can make full use of the existing massive agriculture relevant datasets and can be still utilized with the volume of data growing rapidly, due to big-data friendly processing structure. Secondly, the "nearest neighbors" modeling, which employs results gained from the former data processing structure, provides a well-balanced result on the account of accuracy and prediction time in advance. Numerical examples on actual crop dataset in China from 1995-2014 have showed a better performance and an improved prediction accuracy of the proposed method compared with traditional ones.

TITLE **:** Predict Crop Production India Using Machine Learning Technique:A Survey,

AUTHOR : Bhawana Sharma , Jay Kant Pratap Singh Yadav , Sunitha Yadav

YEAR : 2020

ABSTRACT : The main aim of machine learning is to instruct computers to use data or experience to solve a real-life problem. It can apply as association analysis through supervised learning, unsupervised learning, and Reinforcement Learning. In this study, we will focus on the use of machine learning in agriculture to solve real-life problems. We will focus on the state of art on machine learning and its application in agriculture. Also, we study the use of machine learning in wheat crop production. At last, we identify the gaps in wheat crop production and proposed an architecture using supervised machine learning.`