CROP RECOMMENDATION SYSTEM

(CULTIMATE)

Ansh Joshi
Computer Science and Engineering Acropolis Institute of Technology and Research Indore,India
anshsjoshi@protonmail.com

Anushka Bhanpiya
Computer Science and Engineering
Acropolis Institute of Technology and Research Dewas,India
anushkabhanpiya2464@gmail.com

Anurag Mahajan
Computer Science and Engineering
Acropolis Institute of Technology and Research Burhanpur,India
mahajananurag6812@gmail.com

Avani Jain
Computer Science and Engineering Acropolis Institute of Technology and Research Indore,India
jaina3651@gmail.com

Abstract

In general, agriculture is the backbone of India and conjointly plays a very important role within the Indian economy by providing an exact share of domestic merchandise to ensure food security. However now-a-days, food production and prediction is depleted thanks to unnatural environmental condition changes, which is able to adversely have an effect on the economy of farmers by obtaining a poor yield and conjointly facilitate the farmers to stay less acquainted in prediction of the longer term crops. This analysis work helps the beginner farmer in such a way to guide them for sowing affordable crops by deploying machine learning, one among the advanced technologies in crop prediction. Naive Bayes, a supervised learning algorithmic rule puts forth within the thanks to win it. The seed information of the crops are collected here, with the suitable parameters like temperature, humidness and wet content, that helps the crops to realize a flourishing growth. In addition to the package, a mobile application for mechanical man is being developed. The users are inspired to enter parameters like temperature and their location are going to be taken mechanically during this application so as to begin the prediction method.

Keywords

Image Processing, Analysis, Machine Learning, Learning Algorithm, Crop Prediction*.*

INTRODUCTION

The framework essentially analyzes the soil pictures . These soil pictures are then used to predict the crops
supported by the soil types. In India there are multiple ways to rise the crop learn profit and improve the
quality of the crops thus to carry on the economic growth inside the sector of agriculture. Now-a-day's climatic

conditions aren't predictable like decades ago. It is changing day by day due to globalization So, the implementation of one of the recent advancement in technology such as, Machine learning is one of the

solutions for predicting the crop . The proposed system analyzes the application of supervised machine

learning approaches. Thereby this proposed work will suggest the farmers with effective solutions for more

profitable cultivation.

Methodology:

For farmers it is very important to know which crop they should plant in their farm . So this software helps the

farmers to manage this selection process of selecting the crop on the basis of soil type, temperature and

location .This will help farmers to reduce time while selecting the proper crop to yield , traditionally it takes

time as we have to check ph , nitrogen , potassium ,humidity. By using this system farmers will get a brief idea

of not only soil type but also crops that will grow best in that soil. This system will enhance the agricultural field

in the future.Steps are:

1) Preprocessing-

Image processing is a method to perform some operations on an image, in order to get an enhanced image or to prize some useful information from it. It's a type of signal processing in which input is an image and output may be image or characteristics/ features associated with that image.
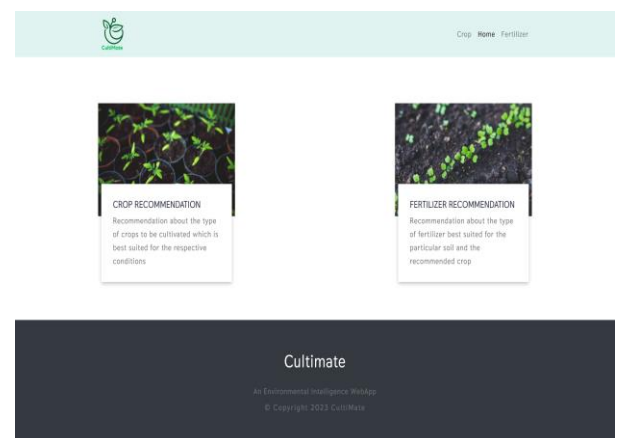
2) Feature Extraction –

Involves reducing the amount of resources required to explain an large set of information. Feature extraction

may be a general term for ways of constructing groups of the variables to induce around these issues whereas

still describing the information with decent accurateness.

3) Classification-

A classification is a division or type in a system which divides things into groups or types.

4) Algorithm-

CNN is a supervised learning algorithm of Deep learning, basically used in image recognition. The Four important layers in CNN are - Convolution layer, ReLu Layer, Pooling Layer, Fully Connected Layer

Conclusion

Agriculture is the field which helps in the economic growth of our country. But this is lacking behind in using new technologies of machine learning. Hence our cultivators should know all the new technologies of machine learning and other new ways. Numerous ways of machine learning and deep learning are applied on farming to help yield rate of crops. These ways also help in working problems of farming. We can also get the accurateness of yield by checking for different approaches. Hence we can enhance the performance by checking the accuracy between different crops. In the future, this system can be administered further using IOT to get the real time data. In the farm, the detectors can be installed to collect information about the current soil conditions.

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