SOIL CLASSIFICATION USING MACHINE LEARNING

A project report submitted to Jawaharlal Nehru Technological University, Kakinada in the partial fulfilment of the requirements for the award of degree of

BACHELOR OF TECHNOLOGY

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

Submitted by

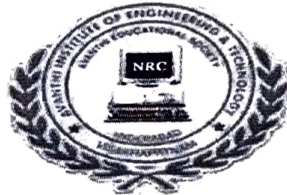|	
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CERTIFICATE

This is certify that the project work entitled " SOIL CLASSIFICATION USING MACHINE LEARNING " is being submitted for the partial fulfilment of requirements for the award of Bachelor of Technology in Electronics and Communication Engineering is a bonafide work done by V.D.H.H.NOOKESH (19815A0425), B.BALA BHASKAR (19815A0402), K.SRINIVASARAO (19815A0414), V.TEJA (19815A0429) under the guidance during year 2021-2022 and it has been found suitable for acceptance according to the requirements of the university.

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ABSTRACT

Soil is an important ingredient of agriculture. There are several kinds of soil. Each type of soil can have different kinds of features and different kinds of crops grow on different types of soils. We need to know the features and characteristics of various soil types to understand which crops grow better in certain soil types. Machine learning techniques can be helpful in this case. In recent years, it is progressed a lot. Machine learning is still an emerging and challenging research field in agricultural data analysis.

In this paper, we have proposed a model that can predict soil series with land type and according to prediction it can suggest suitable crops. Several machine learning algorithms such as weighted k-Nearest Neighbor (k-NN), Bagged Trees, and Gaussian kernel based Support Vector Machines (SVM) are used for soil classification. Experimental results show that the proposed SVM based method performs better than many existing methods.

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