20MCA245 MINI PROJECT

ABSTRACT

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Topic Name: Identifying Plant Species using Convolution Neural Network

Abstract:

In present scenario, the deep learning algorithms are usually applied in the various areas like images to be classified or identified more accurately. One of the application areas of deep learning is the plant identification through its leaf which helps to recognize plant species. Botanists and those who study plants can identify the type of plants at a glance using the characteristics of leaves. However, we propose to identify plants by using digital cameras, mobile devices, using techniques of image processing and pattern recognition. This task is accomplished using deep convolutional neural network to achieve higher accuracy. Features considered for identification are shape, color, and texture, which are to be studied for plant identification. The model acquires a knowledge related to features of leaf dataset which helps to predict the correct category of unknown plant. Finally, the model that is built can be used for real-time identification of plants by anyone through a mobile application developed on this model.

References:

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III. Swedish Leaf Dataset (2020): https://www.cvl.isy.liu.se/en/research/datasets/swedish-leaf/ (Accessed 06 feb 2020)

IV. A Database of Leaf Images: Practice towards Plant Conservation with Plant Pathology: https://data.mendeley.com/datasets/hb74ynkjcn/1 (Published: 7 June 2019)