PLANT LEAF CLASSIFICATION USING TRANSFER LEARNING

Mohammed Fairos Mirza[1] and Hemlatha Joshi[2]
fairooz.mirz98@gmail.comt[1]
Christ University, India

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Abstract

There are over 391,000 plant species currently recognized by scientists, and it can be not easy to differentiate between them. Plant species identification necessitates the use of in-depth surveyors and botanists with extensive knowledge of native plant species. As a result, in both botanical taxonomy and machine learning, plant identification has become an interdisciplinary focus. A convolution neural network system has been proposed in this paper to speed up the recognition process. In large-scale plant classification methods, perform attribute extraction using numerous deep learning models. Transfer learning was used to implement pre-trained models from ImageNet. Inception Resnet V2 and VGG16 are Two deep convolutional feature extraction methods used to remove the images' features. This paper focuses more on Inception Resnet V2 and compares it with VGG16 models. They are provided using two classification methods: Support Vector Machine (SVN) and k-nearest neighbour (KNN).
Keywords: *Plant Leaf, SVM, CNN, KNN, Transfer Learning*