

Plant Leaf Disease Detection using KNN Algorithm

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Abstract: *Software has always been a companion for humans since the boomed invention of automation. All the automation which has been done till date always carried a motive for the ease of complex processes and sometimes for replacing enormous human activities. The project presents plant leaf disease detection, effect of disease on plant yield and the remedies for its cure. In agriculture, research of automatic plant disease is essential in monitoring large fields of plants, and thus automatically detect symptoms of disease as soon as they appear on plant leaves. Every other field has got some benefit from new technologies as compared to the agricultural field. According to past studies, 42% of agricultural production is in loss and that too because of the increasing rate of loss due to plant leaf diseases. To overcome this major issue, this plant leaf disease detection technique can be applied to detect a disease from the input images. This process involved steps like image preprocessing, image segmentation, feature extraction.*

Keywords: Plant Leaf Detection.

REFERENCES

- [1]. S. S. Sannakki and V. S. Rajpurohit, "Classification of Pomegranate Diseases Based on Back Propagation Neural Network," International Research Journal of Engineering and Technology (IRJET), Vol2 Issue: 02 | May-2015
- [2]. P. R. Rothe and R. V. Kshirsagar, "Cotton Leaf Disease Identification using Pattern Recognition Techniques", International Conference on Pervasive Computing (ICPC), 2015.
- [3]. Aakanksha Rastogi, Ritika Arora and Shanu Sharma, "Leaf Disease Detection and Grading using Computer Vision Technology & Fuzzy Logic" 2nd International Conference on Signal Processing and Integrated Networks (SPIN) 2015.
- [4]. Godliver Owomugisha, John A. Quinn, Ernest Mwebaze and James Lwasa, "Automated Vision-Based Diagnosis of Banana Bacterial Wilt Disease and Black Sigatoka Disease", Preceding of the 1st international conference on the use of mobile ICT in Africa, 2014.
- [5]. uan Tian, Chunjiang Zhao, Shenglian Lu and Xinyu Guo, "SVM-based Multiple Classifier System for Recognition of Wheat Leaf Diseases," Proceedings of 2010 Conference on Dependable Computing (CDC'2010), November 20-22, 2010.
- [6]. The detection and classification of leaf diseases using Multiclass Support Vector Machines, 11th National Conference on Science and Engineering, Yangon, Yangon, Myanmar, Ko Ko Zaw, Zin Ma Ma Myo, and Wah Wah Hlaing, 2018.
- [7]. A Survey of Disease Identification and Classification Through Leaf Images: A Computational Method by Sukhvir Kaur, Shreelekha Pandey, Shivani Goel. Received: 26 June 2017 / Accepted: 11 January 2018 CIMNE, Barcelona, Spain 2018.
- [8]. Shima Ramesh Assistant Professor: department of electronics and communication, MVJ College of Engineering. Bangalore, India, 2018 International Conference on Design Innovations for 3Cs Compute Communicate Control Plant Disease Detection Using Machine Learning. Niveditha M, Pooja R, Prasad Bhat N, Shashank N, Research Scholar: department of electronics and communication, MVJ college of Engineering, Bangalore, India.
- [9]. The detection of plant diseases and pests using deep learning: a review by Jun Liu and Xuewei Wang Plant

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[10]. Min Zhang, Qinggang Meng, Citrus canker detection based on leaf images analysis, 2010 IEEE.