Title: Tomato Leaf Disease Detection Using Deep Learning Techniques

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Problem Mentioned/Solution Obtained:

- The paper addresses the problem of early detection of tomato leaf diseases in order to prevent losses in the agricultural economy.
- The proposed solution involves identifying tomato leaf diseases using image processing techniques, such as image segmentation, clustering, and open-source algorithms.
- The objective is to classify tomato leaf diseases and suggest suitable solutions for farmers.

Algorithm Used:

- The paper implements a convolutional neural network (CNN) for disease detection in tomato plants.
- Feature extraction is performed using Discrete Wavelet Transform (DWT) and Gray Level Co-occurrence Matrix (GLCM).

Tools Used/Implemented:

- The proposed methodology is implemented using the open-source programming language Python.

Results and Discussion:

The proposed method achieves an accuracy level of 98% in disease detection.

The paper suggests that the proposed method can be further extended with new algorithms to provide optimum results.

Knowledge Acquired:

The paper provides insights into the use of deep learning techniques, specifically CNN, for tomato leaf disease detection.

It highlights the importance of early detection and suggests a reliable and accurate system for disease identification in tomato plants.

Important Reference:

1. H. Durmus, E. O. Günes and M. Kirci, " Disease detection on the leaves of the tomato plants by using deep learning," in 2017 6th International Conference on Agro-Geoinformatics, Fairfax, VA, USA, 2017.

2. C. Valenzuela, R. G. Baldovino, A. A. Bandala and E. P. Dadios,"Pre Harvest Factors Optimization Using Genetic Algorithm for Lettuce," Journal of Telecommunication, Electronic, and Computer Engineering, vol. 10, 2018.