

DETECTING PLANT LEAF DISEASES USING IMAGE PROCESSING TECHNIQUES: A SURVEY

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Abstract: Most developing countries that rely on agricultural resources, such as India and Malaysia, still employ traditional techniques which are visual inspection to detect plant leaf diseases. Image processing is relatively new, cutting-edge technology in agriculture field to detect plant leaf diseases and the most important approach is through image segmentation. It works by segmenting meaningful information from diseased plant leaf image to be analysed and it is much simpler than traditional techniques. This article covers a survey on various image segmentation techniques such as K-Means, Otsu's, Edge-based, Watershed and Region Growing. It also includes the discussion of advantages and disadvantages of each technique. Aside from that, the accuracy of segmentation achieved by each technique is also reviewed to describe their performance in detecting plant leaf diseases.

Keywords: Plant leaf diseases, Agricultural resources, Image processing, Image segmentation

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