



INFORMATICS  
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## **Plant Disease Detection using Deep Learning Approach**

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## **Abstract & Keywords**

For billions of people on the planet, food security necessitates reducing crop damage through early disease diagnosis. Developing strategies for detecting plant illnesses has the dual benefit of enhancing crop output and lowering pesticide use without knowing what disease is causing the problem. Disease identification, together with the development of better crop varieties, is thus a critical priority for ensuring food security. Manual examination by farmers or professionals has been the conventional method of disease detection, but it is time consuming and expensive, making it unfeasible for millions of small and medium-sized farms around the world. This research is an attempt to employ deep convolutional networks to construct a plant disease recognition model based on leaf picture categorization. The model can recognize different types of plant illnesses and can distinguish plant leaves from their surroundings. The project is designed and implemented as a web application that requires the user to input an image of a plant leaf in order to receive a disease prognosis, and it is the system's fundamental component. The model makes advantage of CNN. The algorithm was trained using data from an online resource that included both healthy and ill leaves. Python is used to implement the project.