IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 6, Issue 1, January 2026
Impact Factor: 7.67

Pomegranate Disease Detection System

Gagan N Gowda[1], Deepak K P[2], Darshan D P[3], Harish B M[4]
Students, Department of CSE [1-4]
Assistant Professor, Department of CSE[5]
Kalpataru Institute of Technology, Tiptur, India

Abstract: *Early detection of plant diseases is crucial for improving agricutural productivity and reducing crop loss. Pomegranate cultivation is highly affected by diseases such as anthracnose, fruit rot, and surface blemishes, which significantly reduce yield and quality.Traditional disease detection methods rely on manual inspection by farmers or agricultural experts, which is time-consuming, subjective, and often inaccurate during early stages of infection.This paper presents a Pomegranate Disease Detection System that uses AI-based image recognition through a web-based application.The system allows users to upload images of pomegranate fruits or leaves, which are preprocessed using basic image resizing techniques. A pre-trained image recognition model accessed through TensorFlow.js is used to analyze visual patterns and generate prediction labels. These predictions are matched with a predefined disease database using a keyword-based scoring mechanism to identify the most probable disease.*

The proposed system does not involve training deep learning or CNN models, making it lightweight, fast, and easy to deploy. Experimental results demonstrate that the system provides accurate disease identification with minimal response time, offering an efficient and user-friendly solution for early pomegranate disease detection..

Keywords: Pomegranate Disease Detection, Computer Vision, TensorFlow.js, Image Recognition, Web-Based AI System

DOI: 10.48175/IJARSCT-30756