GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)

Cheeryal (V), Keesara (M), Medchal Dist., Telangana - 501 301

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MINI PROJECT ABSTRACT
IV B.Tech. I SEM CSE - C Section

BATCH NUMBER: C14	Mini Project	Academic Year: 2024-2025

PROJECT TITLE:

Deep Learning-Based Plant Disease Detection for Agricultural Health Monitoring

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GUIDE DETAILS:

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ABSTRACT

Plant diseases present formidable challenges to global food security, necessitating effective detection methods for prompt intervention. This project explores the utilization of deep learning techniques for automated plant disease detection, addressing the urgent need for accurate diagnostics. Drawing upon primary data sourced from field surveys and image repositories, the study employs exploratory data analysis (EDA), data preprocessing, and model construction leveraging convolutional neural networks (CNNs).

The primary aim of the model is to precisely predict the presence and categorization of plant diseases using leaf images, thereby enabling early detection and mitigation measures. The anticipated outcomes include valuable insights into disease distribution patterns, recommendations for preventive strategies, and ultimately, the augmentation of agricultural productivity.

Keywords: Convolutional Neural Networks, Image Processing, Plant Pathology, Deep Learning, Agricultural Health Monitoring.

Objective:

To develop a deep learning model for automated plant disease detection using leaf images. The model aims to accurately predict the presence and classification of diseases, facilitating timely intervention and management strategies. The objective is to utilize convolutional neural networks (CNNs) to analyze image data and provide robust disease predictions, thereby contributing to enhanced agricultural health monitoring and productivity.

Commercializable: Yes/No: Yes

REFERENCES:

- https://journalofbigdata.springeropen.com/articles/10.1186/s40537-023-00863-9
- https://www.frontiersin.org/journals/plant-science/articles/10.3389/fpls.2016.01419
- https://apsjournals.apsnet.org/doi/10.1094/PDIS-03-15-0340-FE

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