NARASARAOPETA ENGINEERING COLLEGE

(Autonomous)

DEPARTMENT OF CSE (ARTIFICIAL INTELLIGENCE)
2023-2024

Batch Number	BB20
Team Members	. D.HARSHITH - 20471A4310 . P. VISHNU VARDHAN - 20471A4342 . N. JANI BASHA - 20471A4340
Guide	B.Veera Brahmam
Title	DETECTING PLANT DISEASES WITH DEEP CONVOLUTION NEURO-FUZZY NETWORKS
Domain/Technology	DEEP LEARNING
Base Paper Link	https://ieeexplore.ieee.org/document/10104792
Dataset Link	https://www.kaggle.com/code/desuharshith/plant-disease-detection/input
Software Requirements	Browser : Any latest browser like Chrome Operating System : Windows 7 Server or later Language : Python , TensorFlow or PyTorch ,OpenCV
Hardware Requirements	Processor : Intel® Dual Core 2.0GHz Hard Disk : 20 GB or above RAM : 2GB or above
Abstract	When plants and crops are affected by pests it affects the agricultural production of the country. Usually farmers or experts observe the plants with naked eye for detection and identification of disease. But this method can be time processing, expensive and inaccurate. Automatic detection using image processing techniques provide fast and accurate results. . Advances in computer vision present an opportunity to expand and enhance the practice of precise plant protection and extend the market of computer vision applications in the field of precision agriculture. Novel way of training and the methodology used facilitate a quick and easy system implementation in practice. All essential steps required for implementing this disease recognition model are fully described throughout the paper, starting from gathering images in order to create a database, assessed by agricultural experts, a deep learning framework to perform the deep CNN training. This method paper is a new approach in detecting plant diseases using the deep convolutional neural network trained and fine-tuned to fit accurately to the database of a plant's leaves that was gathered independently for diverse plant diseases. The advance and novelty of the developed model lie in its simplicity; healthy leaves and background images are in line with other classes, enabling the model to distinguish between diseased leaves and healthy ones or from the environment by using CNN.

Signature of the Guide **Signature of the Project coordinator** **Signature of the HOD**