NARASARAOPETA ENGINEERING COLLEGE

(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2023-2024

BATCH NUMBER	BB7
TEAM MEMBERS	CH. Harish (20471A0574) M. Gopala Krishna (20471A05A0) SK. Mulla Sadik (20471A05B3)
GUIDE	Dr. S.V.N. Sreenivasu M. Tech, Ph.D
TITLE	Plant Leaf Disease Detection using CNN
DOMAIN/TECHNOLOGY	DEEP LEARNING
BASE PAPER LINK	https://doi.org/10.1109/ICCMC51019.2021.9418042
DATASET LINK	https://www.kaggle.com/datasets/vipoooool/new-plant-diseases-dataset
SOFTWARE REQUIREMENTS	Browser: Any latest browser like Chrome Operating System: Windows 7 Server or later Python (COLAB)
HARDWARE REQUIREMENTS	Processor: Intel® Dual Core 2.0GHz minimum Hard Disk: 1TB minimum RAM: 8GB or more

ABSTRACT	Farming output plays a crucial part in India's economic landscape, yet it faces significant setbacks from pests and crop illnesses. Over the last twenty years, neural networks have represented a significant leap in addressing these issues. Yet, the current infrastructures are resource-intensive and expensive to deploy. These activities also typically necessitate a collection of leaf photographs that mimic actual environmental conditions, a resource that is difficult to procure. Hence, the aim of this study is to address these challenges through the development of a cost-effective and streamlined deep learning structure utilizing the suggested CNN model. By employing 46,800 photos for validation and 60,000 images for training, this method divides the collection of leaf images known as "PlantDoc" into 38 classes.An independent dataset is reserved exclusively for evaluating model efficacy on unseen data. The CNN framework is utilized for its rapid processing capabilities, straightforward process, and distinct data purification features.