Technology Stack (Architecture & Stack)

Fertilizers Recommendation System For Disease Prediction

Date	**14 October 2022**
Team ID	**PNT2022TMID03970**
Project Name	**Project – Fertilizer Recommendation System for Disease Prediction**

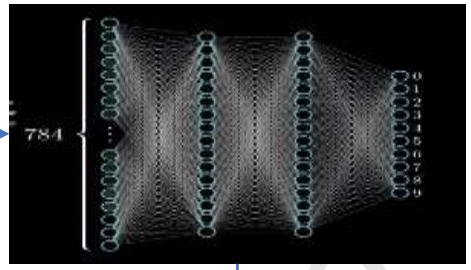
Fruit Disease Dataset

Data Collection

Vegetable Disease Dataset

Data Visualization

Optimization for stronger composition



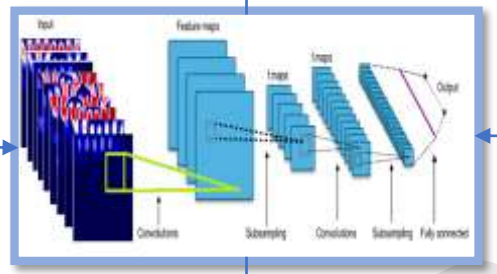


Image Transformations

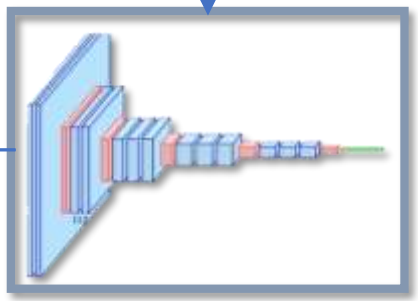
PRETEXT TASK

Prediction: Diseased

Prediction: Healthy

Fruit diseases

Vegetable diseases



Network Training

Model

User Input

Fertilizer Recommendation for Diseased

DOWNSTREAM TASK

Technology Stack

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	How user interacts with the website.	HTML, CSS, Angular Js
2	Disease Prediction	Disease in the leaf is predicted through pretrained models	CNN, Keras, Tensorflow
3	Fertilizer Recommendation	Fertilizer is recommended for the predicted disease	User Interface,HTML,CSS
4	Database	The training datas are collectively stored	Kaggle, Github
5	File Storage	File storage requirements	IBM, Local File System.
6	Modules	Purpose of deep learning modules	Image recognition modules, etc.
7	Deep Learning Model	Purpose of Deep Learning Model	VGG19 and MobileNetV2 etc.
8	Infrastructure (Server)	Application Deployment on Local System - local server configuration:	Local File system

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	List the open-source frameworks used	Open source - Vscode,anaconda navigator, PyCharm
2	Security Implementations	List all the security / access controls implemented	OWASP
3	Scalable Architecture	Justify the scalability of architecture	Vscode/PyCharm
4	Availability	Justify the availability of application	Web application accessible to all users.
5	Performance	Design consideration for the performance of the application	Convolutional Neural Network