

Ideation Phase

Literature Survey

Date	3 September 2022
Team ID	PNT2022TMID09970
Project Name	Fertilizers Recommendation System for Disease Prediction
Maximum Marks	2 Marks

S. No.	TITLE	AUTHOR	YEAR OF PUBLICATION	PROBLEM IDENTIFIED	TECHNIQUES USED	DRAWBACKS
1	Predictive and Preventive methods in Agriculture using Machine Learning.	Subhashit Mukherjee, et.al.,	2022	Provides solution for crop protection and yield.	-Machine Learning (ML)	Sometimes error occurs with picture navigation while detecting the plant disease.
2	A Smartphone-based Plant Disease Detection and Treatment Recommendation System using Machine Learning Techniques.	Folasade Olubusola Isinkaye, et.al.,	2022	Detecting the problem and providing recommends treatment for plant diseases by taking pictures of the infected plant.	-Machine Learning -CNN was used for feature extraction. -ANN and KNN were used to classify the plant diseases. -DL and SVM	Finding accurate result is a challenge.
3	A Machine Learning Based Crop Recommendation System: A Survey.	Rohini Jadhav	2022	To provide an effective and user-friendly yield prediction system.	-Support Vector Machine (SVM) -Artificial Neural Network (ANN), -Random Forest (RF), -Multivariate Linear Network (MLN)	-Nil-
4	A Mobile-Based System for Detecting Plant Leaf Diseases Using Deep Learning.	Ahmed Abdelmoamen Ahmed et.al.,	2021	Detection, Monitoring, and Prediction of crop diseases to reduce crop agriculture losses	-Machine Learning (ML)	Expects farmers to use monitors.
5	Identification of Plant Diseases Using Machine Learning: A Survey.	Snehal andhare, et.al.,	2021	Describes the machine learning approach for plant disease identification and a detailed study of various techniques is classified.	-Machine Learning -SVM, ANN and CNN	The process is a bit complex.

6	Artificial Neural Networks Based Integrated Crop Recommendation System Using Soil.	J Madhuri, et.al.,	2021	Recommends plants based on soil and climate condition.	-Artificial Neural Networks (ANN)	User interface for this might be a bit difficult for uneducated famers.
7	Review of image processing approaches for detecting plant diseases.	Aditya Sinha et.al.,	2020	Detection of diseases at an early stage and quantification of the severity.	-Machine Learning (ML)	Interaction with the application is a bit complex.
8	Classification of Maize leaf diseases from healthy leaves using Deep Forest.	Jatin Arora.	2020	Classification of maize plant leaf diseases.	-Deep forest algorithm -Machine Learning.	Study was done for only one variant of crop.
9	Leaf Disease Detection using Image Processing.	Karthikeyan. N	2020	Discovery of disease in plants using the input picture	-SVM and CNN.	Picture navigation might cause error.
10	Research on Recognition Model of Crop Diseases and Insect Pests Based on Deep Learning in Harsh Environments.	YONG AI1, et.al.,	2020	Recommending Solution for crop diseases and insect pests using deep learning.	-Deep learning.	Process is a bit complex.
11	Fertilizers Recommendation System for Disease Prediction In Tree Leave.	R. Neela et.al.,	2019	The leaf disease is identified by using Support Vector Machine. The disease-based similarity measure is used for fertilizer recommendation.	-Support Vector Machine (SVM)	Accuracy can be improved further.
12	Application of machine learning in detection of blast disease in South Indian rice crops.	S. Ramesh, et.al.,	2019	This paper proposes rice blast disease detection mechanism using Machine learning algorithm, to identify the disease in the early stage of the crop cultivation.	-Machine Learning -KNN and ANN..	-Nil-
13	Using Deep Learning for Image-Based Plant Disease Detection.	Sharada P. Mohanty, et.al.,	2016	Detecting plant disease using images with the concept of deep learning.	-Deep Learning.	Very few reference pictures were used.

14	Crop Recommendation System for Precision Agriculture.	S. Pudumalar, et.al.,	2016	Recommends crop based on the climatic condition and soil quality.	-Machine learning.	Recommendation is available for very few crop varieties.
15	An Artificial Neural Network Approach for Agricultural Crop Yield Prediction Based on Various Parameters.	Snehal S. Dahikar.	2015	Predicting crop yield based on the climate and plant requirements.	-ANN.	Study was done only for very few crops.
16	Digital image processing techniques for detecting, quantifying and classifying plant diseases.	Jayme Garcia Arnal Barbedo.	2013	To detect and to classify the disease in plant by analyzing the visible symptoms in leaves and stems.	-SVM and ANN.	Detection of disease is done only for visible symptoms in leaves and stems were considered.