FERTILIZERS RECOMMENDATION SYSTEM FOR DISEASE PREDICTION

Team ID:
PNT2022TMID22999
Team Leader:
Harshini. T
Team Members:
Divya Sri.N
Paarkavi Priya. S
Kharshitha Bhuvani. E

Facutly Mentor:
Dr. R. Vijayalakshmi, B.E, M.E, Ph.D.

Project Description

- Agriculture is the most important sector in today's life. Most plants are affected by a wide variety of bacterial and fungal diseases
- Hence, early and accurate identification of plant diseases is essential to ensure high quantity and best quality
- In recent years, the number of diseases on plants and the degree of harm caused has increased due to the variation in pathogen varieties, changes in cultivation methods, and inadequate plant protection techniques
- An automated system is introduced to identify different diseases on plants by checking the symptoms shown on the leaves of the plant
- Deep learning techniques are used to identify the diseases and suggest the precautions that can be taken for those diseases

Survey Paper-1

- **Author – Limin Chuan, Ping Hea**
- **Title – Estimating Nutrient update requirements for wheat in China**
- **Established By - IEEE**
- **Published Time – January 2013**
- **Objectives - Two parameters namely yield response and agronomic efficiency are used by the recommendation system. It also considers the Nitrogen, Phosphorous, and Potassium (NPK) contents for fertilizer recommendation of wheat. It helps to prevent the inappropriate application of fertilizers in wheat production systems in China.**

Survey Paper-2

- **Author - Hao Zhang, Li Zhang, Yanna Ren, Juan Zhang, Xin Xu, Xinming Ma, Zhongmin Lu**
- **Title – Design and implementation of crop recommendation fertilization decision system based on WEBGIS at village scale**
- **Established By – IEEE**
- **Published Time –March 2015**
- **Objectives – It is specifically developed for villages in China. Maps of villages are taken and location-specific recommendations are provided using ArcView in ArcGIS. Three parameters are considered for recommendations namely soil measurements, farm production level, and target yield for the crop.**

Survey Paper-3

- **Author - Mansi Shinde1, Kimaya Ekbote, Sonali Ghorpade, Sanket Pawar, Shubhada Mone**
- **Title – Crop recommendation and fertilizer purchase system**
- **Established By – International Journal of Computer Science and Information Technologies**
- **Published Time – December 2017**
- **Objectives - Recommendations for purchasing fertilizers from an online portal based on the history of past purchases. Apriori algorithm is used for this purpose. Apriori algorithm is a sequence of steps to be followed to find the most frequent itemset in the given database.**

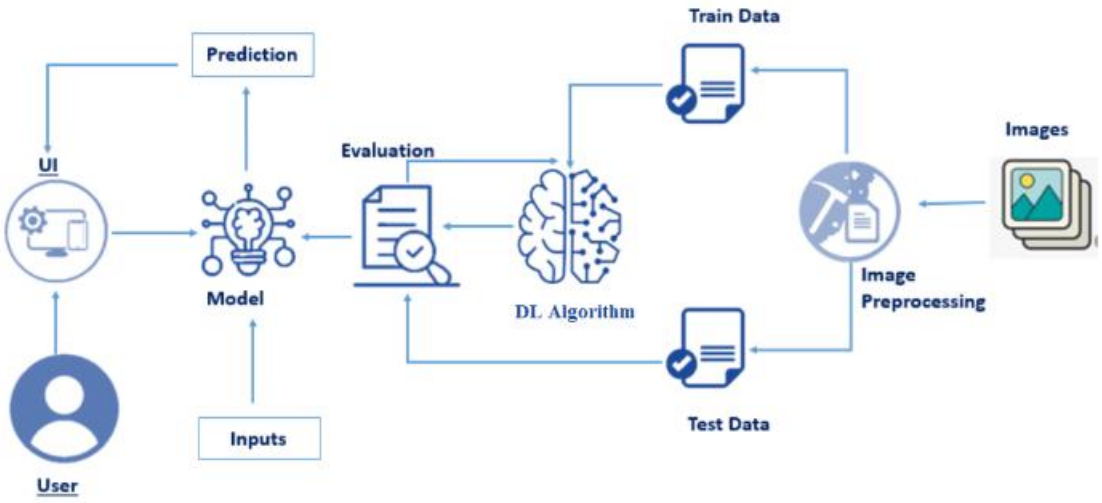
Survey Paper-4

- **Author - Zhimin Liu, Weidong Xiong, Xuewei Cao**
- **Title - Design of Precision Fertilization Management Information System on GPS and GIS Technologies**
- **Established By – IEEE**
- **Published Time – March 2019**
- **Objectives - Recommendations are done by applying data mining techniques to information collected by GIS and GPS. Precision Fertilization Management Information System (PFMIS) is a fertilization recommendation system based on GIS and GPS. ArcGIS is used for maps on soil resources**

Survey Paper-5

- **Author – Kiran Shinde, Jerrin Andrei, Amey Oke**
- **Title - Web Based Recommendation System for Farmers**
- **Established By – International Journal on Recent and Innovation Trends in Computing and Communication**
- **Published Time – November 2019**
- **Objectives - For crop recommendations, they have used market trends data and applied a random forest algorithm to that. They have developed a web-based recommendation system for crop and fertilizers recommendation by considering past data about market prices.**

TECHNICAL ARCHITECTURE



Thank You!