International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 07 Issue: 10 | October - 2023 SJIF Rating: 8.176 ISSN: 2582-3930

App-based Solution to Identify and Solve Disease in Plants/Crops

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Abstract - Identification of the plant diseases is the key to preventing the losses in the yield and quantity of the agricultural product. However, early detection and proper treatment can help minimize these losses. In today's technology-driven world, an app-based solution for identifying and solving plant diseases has emerged as a powerful tool for farmers. The app could work by allowing farmers to take a photo of a diseased plant or crop and upload it to the app. The app would then use machine learning to analyze the image and identify the type of disease. Main goal of our project is after identification of medicinal plantand crop ,system will display basic information about plant such as local name, scientific name, and medicinal uses.

***Key Words*:** Plant And Crop Diseases Identification
Crop protection, Plant health monitoring

1.INTRODUCTION

Plants and crops are identified by human experts using their visual features and aroma. Incorrect identification of medicinal plants or leaves may lead to adverse results. Manual identification of medicinal plants is a time consuming process and needs the help of experts for plant identification. To overcome this problem, automatic identification and classification of medicinal plants,crops and leaves is needed for greater benefit to humankind.
A medicinal plant is any plant which, in one or more of its organs, contains substances that can be used for therapeutic purposes or which are precursors for the synthesis of useful drugs.

2. Review of Literature

. 2.1 Study of Existing System This software exists in like farmer or human beings. Features of this software are as follows:
1. Many application available related to only plant identification
2. the software can be easily handled by only android user

2.1.1 Findings from Literature Review By studying deeply existing software. we came to conclusion that this software lacks of features such as:

1. The software can be handled by android users as well as IOS users.
2. Our Software can provide s helpful information about plant, as well as crops and leafs and what precision to be taken to minimize diseases of plant /crops and provide the proper treatment.

3. Proposed System/Problem Definition

Problem Statement

The worldwide agricultural industry performs a crucial function in making sure meals security and monetary balance. Farmers and gardeners often struggle to accurately identify plant diseases, leading to incorrect or delayed treatment.Farmers and gardeners regularly war to correctly identify plant diseases, leading to incorrect or not on time treatment.

However, it faces a vast undertaking within the form of plant diseases, which could result

in crop losses, reduced yields, and improved production fees

Project Scope

To develop a mobile application that helps farmers and plant enthusiasts identify and manage diseases affecting crops and plants. The app will provide an easy-to-use interface for diagnosis, joy, and treatment suggestions.

Image detection: Users can take pictures of the plants involved, and the app will detect potential diseases.

disease Information: Users can access information about diagnosed diseases, including causes, effects and plants involved.

4. Objective of Proposed System

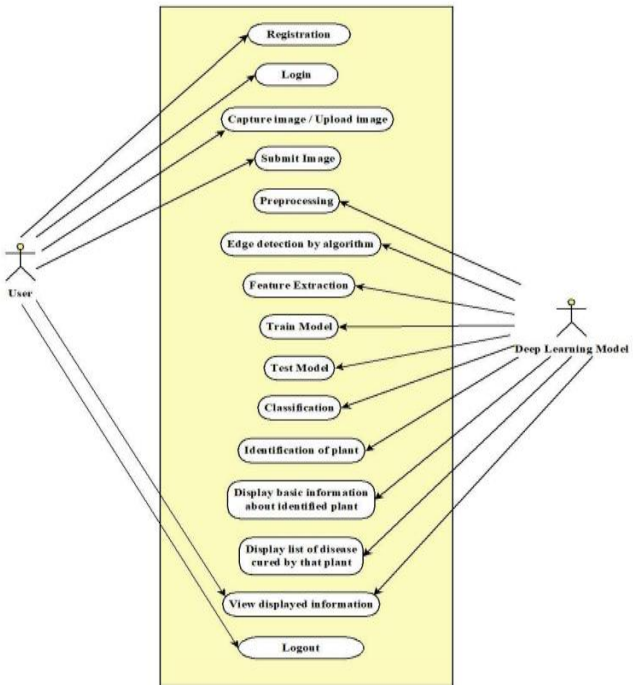
1.Early Disease Detection: Enable users, consisting of farmers and agricultural professionals, to speedy and as it should be identify diseases in plants and crops viaphoto reputation and facts evaluation.

2. Disease Monitoring: Provide a platform for continuous tracking of the health of plants and crops, supporting user discover diseases at an early level.

3. Accessibility and Ease of Use: Ensure that the app is user-pleasant and on hand to a wide range of users, which includes people with limited technical information.

4. Crop Health Improvement: Ultimately, enhance crop health, increase agricultural productiveness, and decrease the economic and environmental effect of plant dis-eases.

5.ER



5. Modules of Software System

- Problem Identification and Research
- Data Collection and Integration
- Image Recognition and Deep learning machine:
- User-Friendly Mobile App Development:
- User Registration and Profiles:
- Disease Diagnosis:
- Treatment Recommendations:

6. REQUIREMENTS

Software Requirement

Frontend

• HTML

• User Interface

•Anriod Studio

Backend

• Python IDE to run machine learning modules.

• Database

Hardware with specification

• sensor

• Computer System with i7 11th generation

above 8GB r above Ram

7. **Application of Proposed System**

1. Environmental Monitoring: The technology can be applied in ecological research to assess the health of vegetation in natural ecosystems.
2. Research and Education: Researchers, students, and botanists can use it to study and learn about various plant species and their health indicators.
3. Disease Detection: It can help farmers and gardeners identify diseases and pests affecting plants, allowing for early intervention and targeted treatment.
4. Crop Health Monitoring: The app can monitor the overall health of crops by analyzing leaf color, size, and other parameters, enabling farmers to optimize their
farming practices.

9. Advantages, Disadvantages

Advantages

- Disease Identification
- Increased Crop Yield
- Cost Saving
- Precision Agriculture

- Real-Time Monitoring

Disadvantages

- Only a few medicinal plants are identified
- Our system identifies the medicinal plant only from characteristics of leaves of the plant.
- Our system's proposed methods are not suitable for tiny leaves or plants without a proper leaf

Conclusions and Future

Our work is to enhance the research in identification and classification of medicinal plants as herbs, shrubs and trees using flowers and fruits/seeds features including leaf. Automatic identification and classification of medicinal plants will provide medicinal knowledge to common people and farmers which help in increasing production of such essential plants. This automatic classification system also helps botanists, consumers, forestry services, taxonomists, pharmaceutical companies and Ayurveda practioners to identify and classify the medicinal plants without any human assistance

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