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Creating an System that helps to gather information regarding plant diseases,crop recommendation, etc.

ABSTRACT

This presents an innovative application leveraging machine learning (ML) techniques to enhance agricultural and home gardening practices through a comprehensive approach. The proposed system integrates three key modules: Fertilizer Recommendation, Crop Disease Detection, and aCommunity Section for user interaction. The Fertilizer Recommendation module utilizes ML algorithms to analyze soil characteristics, crop type, and historical data to provide personalized and optimal fertilizer suggestions, promoting precision farming. The Crop Disease Detection module utilizes sophisticated ML models to identify potential diseases in crops, leveraging image recognition, environmental data, and historical disease patterns. Early detection facilitates prompt intervention, minimizing crop losses and ensuring sustainable farming practices. The Community Section fosters a collaborative environment where anyone can connect, share experiences, and seek advice, creating a supportive network.

METHODOLOGY/FLOWCHART

The proposed system is divided into four main modules, namely

1) Data collection and preprocessing
2) Model building for detecting crop disease from images and collecting information about crops value such as (p,k,n) values.
3) Providing an community to connect the farmers and home gardeners for the same.
4) Implementation of an system to provide a network which shows .

INTRODUCTION

Home gardening has gained significant popularity in recent years, driven by a growing interest in sustainable living, healthy eating, and the desire for a closer connection to food sources. As individuals increasingly engage in cultivating their own produce, the need for tools that optimize the gardening process becomes apparent. Traditional methods often lack precision and may lead to suboptimal results.

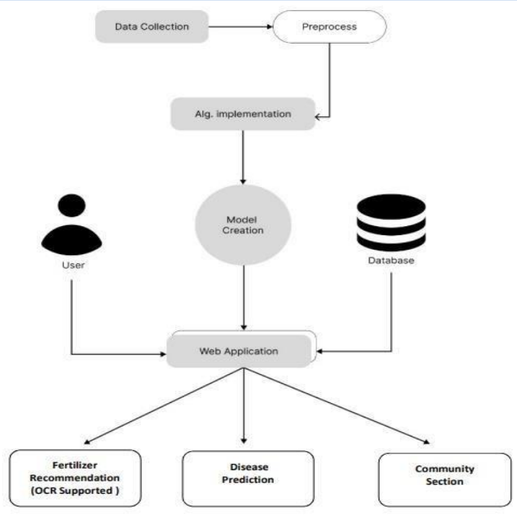
This paper addresses the challenges faced by home gardeners and proposes machine learning-based tool to enhance their gardening practices.

The motivation behind developing a machine learning-based tool for home gardening stems from the recognition of several key challenges faced by individuals attempting togrow their own crops. These challenges include varying environmental conditions, limited knowledge about optimal planting and harvesting times, and the need forpersonalized guidance. By leveraging the power of machine learning, we aim to empower home gardeners with a tool that adapts to specific conditions, providing tailored recommendations for each user's unique gardening environment.

RESULTS

The **HARVESTIFY** tool integrates advanced machine learning techniques with agricultural expertise to deliver precise fertilizer recommendations tailored to individual crop needs, leading to increased yields and resource efficiency. Through convolution neural network technology, the app enables early detection and accurate diagnosis of plant diseases with an accuracy of 72% , empowering farmers to implement timely interventions and protect their crops. Additionally, the community section fosters knowledge sharing and collaborative learning, providing a platform for farmers to exchange insights, seek advice, and enhance their agricultural practices. Overall, the app revolutionizes farming by leveraging technology to optimize decision-making, promote sustainability, and build a supportive community dedicated to agricultural excellence.

BLOCK DIAGRAM



CONCLUSION

In conclusion, this research has presented a comprehensive machine learning-based tool for home gardening, addressing the challenges faced by individual gardeners in optimizing their cultivation practices. The findings of this study can be summarized as follows: The machine learning-based tool demonstrated a remarkable ability to provide personalized recommendations for optimal planting and harvesting times, taking into account specific environmental conditions, plant characteristics, and user preferences.

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