INFORMATICS INSTITUTE OF TECHNOLOGY

INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

UNIVERSITY OF WESTMINSTER

Citrus disease detection system

Thesis

Oshadha Perera

Supervised by

Mr. Sriyan Fernando

May 2023

Acknowledgement

I am deeply grateful to extend my sincerest gratitude to the remarkable individuals who have played an integral part in bringing this report to fruition.

Foremost, I would like to express my profound appreciation for the invaluable guidance, unwavering support, and unmatched expertise provided by my esteemed supervisor, Mr. Sriyan Fernando. Their astute insights and constructive recommendations have played a pivotal role in molding and refining this report.

To my cherished friends and beloved family, I wish to convey my heartfelt thanks for their unwavering support, constant encouragement, and profound understanding throughout this transformative journey. Their ceaseless motivation and unwavering belief in my capabilities have served as beacons of inspiration, fueling my determination and focus.

I would like to express my sincerest appreciation to every individual who graciously devoted their time, expertise, and unique perspectives to contribute to this study. Their generous contributions have significantly enhanced the outcomes and conclusions elucidated in this report.

Abstract

The Citrus Fruit Disease Identification System is a cutting-edge system that seamlessly combines disease diagnosis and fertilizer suggestion features created exclusively for Citrus plants. This cutting-edge system gives growers the ability to identify diseases affecting their citrus crops precisely and reliably while also giving them personalized and tailored fertilizer

recommendations to maximize plant health and productivity. It does this by leveraging the power of sophisticated machine learning algorithms.

The cutting-edge technology uses sophisticated deep learning algorithms to extensively analyse visual representations of citrus fruit trees with astounding accuracy and quickly identify common ailments. Additionally, this modern system provides crucial insights into customized fertilizers and treatment methods designed particularly to address the ailments discovered. Armed with this priceless information, growers can respond quickly and successfully to the problems at hand, assuring timely intervention and the deployment of appropriate treatments.

The Citrus Fruit Disease Identification System offers a user-friendly interface that is simple to use on mobile devices, guaranteeing producers a flawless experience. This system gives citrus producers the resources they need to effectively monitor plant health and increase crop yield by integrating disease detection capabilities with fertilizer recommendations. By using the potential of this modern technology, producers are given the tools they need to successfully negotiate the difficulties of plant health management, which eventually results in notable increases in their total yields.

Table of content

Table of Contents