VISVESVARAYA TECHNOLOGICAL UNIVERSITY
"Jnana Sangama", Belagavi-560014, Karnataka

<u>A PROJECT REPORT ON</u>

"LEAF DISEASE DETECTION WITH SUPPLEMENT RECOMMENDATION"

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE

BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE & ENGINEERING

<u>Submitted By</u>

HARSHITHA C [1SV19CS034]

CHETHAN V   [1SV19CS023]

J N SHREYAS   [1SV19CS036]

BHAVANA C   [1SV19CS018]

Under the guidance of

Mr. Girish L B.E., M.Tech.,

Assistant Professor, Dept. of CSE.

PRINCIPAL
SIET. TUMKUR.

Department of Computer Science and Engineering

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Affiliated To Visvesvaraya Technological University)
Sira Road, Tumakuru – 572 106, Karnataka.
2022-23

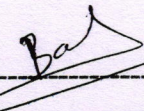# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that, the project entitled "LEAF DISEASE DETECTION WITH SUPPLEMENT RECOMMENDATION" has been successfully carried out by HARSHITHA C [1SV19CS034], CHETHAN V [1SV19CS023], J N SHREYAS [1SV19CS036], BHAVANA C [1SV19CS018], in partial fulfillment for the award of **Bachelor of Engineering** in **Computer Science & Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year 2022-23. It is certified that all the corrections/suggestions indicated for internal assessments have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.
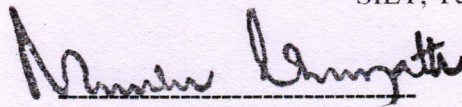
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Signature of Guide
Mr. Girish L B.E., M.Tech.,
Assistant Professor,
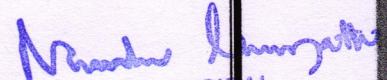Dept. of CSE,
SIET, Tumakuru.

_____ 24/5/23
Signature of H.O.D
Dr. BASAVESHA D B.E., M TECH,PH.D,
Associate Professor & HOD
Dept. of CSE,
SIET, Tumakuru.

Signature of Principal
Dr.Narendra Viswanath M.E., Ph.D., MIE, MISTE, MIWS., FIV.,
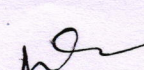Principal,
SIET, Tumakuru

PRINCIPAL
SIET. TUMKUR.

External Viva

Name of the Examiners	Signature with Date
1. Dr. Basavesha D	25/5/23
2. Manmodd	25/5/23

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DECLARATION

We, **HARSHITHA C [1SV19CS034], CHETHAN V [1SV1CS023], BHAVANA C [1SV19CS018], J N SHREYAS[1SV19CS036]**, student of VIII semester **B.E** in Computer Science & Engineering, at Shridevi Institute of Engineering & Technology, Tumakuru, hereby declare that, the project work-II entitled **"Leaf Disease Detection with Supplement Recommendation"**, embodies the report of our project work carried out by our team under the guidance of **Mr. Girish L, Assistant Professor, Department of CSE, SIET, Tumakuru** as partial fulfillment of requirements for the award of the degree in **Bachelor of Engineering in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi,** during the academic year **2022-23**. The project has been approved as it satisfies the academic requirements in respect to the Project work.

Place: Tumakuru

Date: 26|05|2023

Student Name & Signature

HARSHITHA C [1SV19CS034]	Harshitha . c
CHETHAN V [1SV19CS023]	*(signature)*
BHAVANA C [1SV19CS018]	Bhavana.C
J N SHREYAS [1SV19CS036]	*(signature)*

PRINCIPAL
SIET. TUMKUR.

Date: 23/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. BHAVANA C** bearing USN **1SV19CS018** Student of **Shridevi Institute of Engineering and Technology** has successfully completed her Project Work titled "Leaf Disease Detection with Supplement Recommendation".

We wish every success in her career.

For ShriTEK Innovations

Authorized Signature

PRINCIPAL
SIET. TUMKUR.

Date: 23/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. J N SHREYAS** bearing USN **1SV19CS036** Student of **Shridevi Institute of Engineering and Technology** has successfully completed his Project Work titled "Leaf Disease Detection with Supplement Recommendation".

We wish every success in his career.

For ShriTEK Innovations

Authorized Signature

PRINCIPAL
SIET TUMKUR.

Date: 23/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. HARSHITHA C** bearing USN **1SV19CS034** Student of **Shridevi Institute of Engineering and Technology** has successfully completed her Project Work titled "Leaf Disease Detection with Supplement Recommendation".

We wish every success in her career.

For ShriTEK Innovations
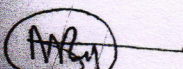
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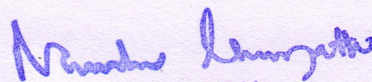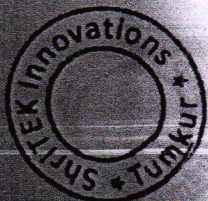
PRINCIPAL
SIET. TUMKUR.

Date: 23/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. CHETHAN V** bearing USN **1SV19CS023** Student of **Shridevi Institute of Engineering and Technology** has successfully completed his Project Work titled "Leaf Disease Detection with Supplement Recommendation".

We wish every success in his career.

For ShriTEK Innovations

PRINCIPAL
SIET. TUMKUR.

Authorized Signature
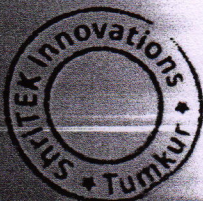
ACKNOWLEDGEMENT

This project work will be incomplete without thanking the personalities responsible for this venture, which otherwise would not have become a reality.

We express our profound gratitude to **Dr.Narendra Viswanath,** Principal, S.I.E.T, for his moral support towards completing our project work.

We would like to thank Head of Department **Dr.Basavesha D**. Head, Department of CSE, SIET for providing all the support and facility.

We would like to thank my guide **Mr. Girish L, Assistant Professor,** Department of computer Science and Engineering, SIET for his help, sharing his technical expertise and timely advice

We would like to express our sincere gratitude to all teaching and non-teaching faculty of the department of CSE for guiding us throughout the course of this project by giving valuable suggestion and encouragement.
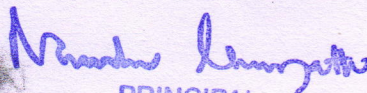
By,

HARSHITHA C [1SV19CS034]

BHAVANA C   [1SV19CS018]

CHETHAN V   [1SV19CS023]

J N SHREYAS   [1SV19CS036]

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ABSTRACT

Plant diseases pose a significant threat to agricultural productivity and food security worldwide. Early and accurate detection of leaf diseases is crucial for effective disease management and prevention. In recent years, machine learning techniques have shown great promise in automating the detection process, offering fast and reliable solutions to mitigate the impact of plant diseases.Leaf disease detection using Convolutional Neural Networks (CNN) is a powerful technique that automates the identification and classification of plant diseases. By training a CNN model on labeled leaf images, relevant features and patterns associated with diseases are learned. Experimental evaluations have demonstrated high accuracy in distinguishing between healthy and diseased leaves, surpassing human experts in some cases. The CNN approach offers robustness to variations in lighting conditions and image quality, enabling its practical application. Automated disease detection using CNN has the potential to revolutionize disease management practices, leading to improved crop yield and agricultural sustainability.

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