

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## "CREDIT CARD FRAUD DETECTION USING MACHINE LEARNING"

*Project Report submitted in partial fulfilment of the requirement for the award of the degree of*

**BACHELOR OF ENGINEERING  
IN  
COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

BHARGAV M	1KG19CS009
GAURAV G	1KG19CS032
HARSITH S	1KG19CS037
SUHAIL AHMED SAYYED	1KG19CS100

Under the guidance of  
Mrs. BELJI T

Assistant Professor  
Department of Computer Science & Engineering  
KSSEM, Bengaluru-560109



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
**K. S. School of Engineering and Management**  
#15, Mallasandra, off. Kanakapura Road, Bengaluru - 560109  
2022 - 2023

K. S. School of Engineering and Management  
#15, Mallasandra, off. Kanakapura Road, Bengaluru - 560109

Department of Computer Science & Engineering



**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled "CREDIT CARD FRAUD DETECTION USING MACHINE LEARNING" is a bonafide work carried out by:

BHARGAV M	1KG19CS009
GAURAV G	1KG19CS032
HARSITH S	1KG19CS037
SUHAIL AHMED SAYYED	1KG19CS100

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

A handwritten signature in black ink, appearing to be 'Belji T', written over a dotted line.

Signature of the Guide

[Mrs. Belji T]

A handwritten signature in black ink, appearing to be 'Dr. K Venkata Rao', written over a dotted line.

Signature of the HOD

[Dr. K Venkata Rao]  
HOD

Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bangalore-560109

A handwritten signature in green ink, appearing to be 'Dr. K Rama Narasimha', written over a dotted line.

Signature of the Principal

[Dr. K Rama Narasimha]

Dr. K. RAMA NARASIMHA  
Principal/Director

K S School of Engineering and Management  
Bengaluru - 560 109

**Visvesvaraya Technological University**  
Jnana Sangama, Belagavi - 590018



A Project Work Phase-II (18CSP83)

Report on

**“Underwater Object Detection Based On Improved CNN”**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

Submitted by

Prakruthi P S	1KG19CS066
Rakshitha M V	1KG19CS073
Samrudh R	1KG19CS080

Under the guidance of  
Mrs. Nagaveni B. Nimbai  
Assistant Professor  
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**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled "Underwater Object Detection Based On Improved CNN" is a bonafide work carried out by:

Prakruthi P S	1KG19CS066
Rakshitha M V	1KG19CS073
Samrudh R	1KG19CS080

in partial fulfilment for VII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-II Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

Signature of the Guide

Signature of the HOD

Signature of the Principal

[Mrs.Nagaveni B. Nimbal]

HOD  
Department of Computer Science Engineering  
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Bangalore-560109

Dr. K. RAMA NARASIMHA  
Principal/Director  
K S School of Engineering and Management  
Bengaluru - 560 109

**Visvesvaraya Technological University**  
Jnana Sangama, Belagavi - 590018



A Project Work Phase-II (18CSP83)  
Report on

**“MULBERRY LEAF DISEASE DETECTION”**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

ARSHITHA K	1KG19CS008
BHUVANASHRI K B	1KG19CS012
CHAITHRA SHETTY S	1KG19CS017
NAMRATHA S	1KG19CS058

Under the guidance of  
Mrs. Nagaveni B Nimbhal  
Assistant Professor  
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CERTIFICATE

Certified that the Project Work Phase-II (18CSP83) entitled "Mulberry Leaf Disease Detection" is a bonafide work carried out by:

ARSHITHA K	1KG19CS008
BHUVANASHRI K B	1KG19CS012
CHAITHRA SHETTY S	1KG19CS017
NAMRATHA S	1KG19CS058

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-II Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

  
.....  
Signature of the Guide

[Mrs.Nagaveni B. Nimbal]

  
.....  
Signature of the HOD

[Dr. K Venkata Rao]

  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]

**Dr. K. RAMA NARASIMHA**

Principal/Director

HOD  
Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bangalore-560109

K.S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## **“TO DESIGN AND IMPLEMENT A TRAINING MODULE ON YOGA INTELLIGENCE”**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

L DURGA PRASAD	(1KG19CS042)
PAVAN KUMAR C	(1KG19CS062)
PUNITH K	(1KG19CS068)
VARUN RAO	(1KG19CS114)

Under the guidance of

Mrs. PRASANNA N

Assistant Professor

Department of Computer Science & Engineering

KSSEM, Bengaluru-560109



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Department of Computer Science & Engineering



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Certified that the Project Work Phase-II (18CSP83) entitled "TO DESIGN AND IMPLEMENT A TRAINING MODULE ON YOGA INTELLIGENCE" is a bonafide work carried out by:

L DURGA PRASAD	1KG19CS042
PAVAN KUMAR C	1KG19CS062
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VARUN RAO	1KG19CS114

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

*Prasanna N*  
11/5/23  
.....  
Signature of the Guide

[Mrs. Prasanna N]

*[Signature]*  
.....  
Signature of the HOD

[Dr. K Venkata Rao]  
HOD

Department of Computer Science Engineering  
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*[Signature]*  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]

**Dr. K. RAMA NARASIMHA**  
Principal/Director

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Bangaluru - 560 109



# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## “WATER QUALITY MONITORING SYSTEM USING IOT”

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Nischitha D	1KG18CS067
AC Praveen Chowdary	1KG19CS001
Arjun M	1KG19CS007
Ayesha A	1KG20CS401

Under the guidance of

Ms. Punitha M R

Asst. Prof, CSE, KSSEM

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## Department of Computer Science & Engineering

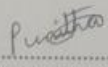


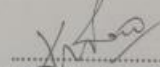
### CERTIFICATE


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Signature of the Guide  
[Ms. Punitha MR]

  
Signature of the HOD  
[Dr. K Venkata Rao]

  
Signature of the Principal  
[Dr. KRama Narasimha]

HOD  
Department of Computer Science Engineering  
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Principal/Director  
K.S School of Engineering and Management  
Bangaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## “Machine Learning based model for prediction of Autism Spectrum Disorder”

*Project Report submitted in partial fulfilment of the requirement for the award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Dhanush Vasudevaraju	1KG19CS025
C.Ramesh Chandra	1KG19CS015
C.Sai Ranganath	1KG19CS016
Dinesh.M	1KG19CS026

Under the guidance of

Mrs. Sandhya A. Kulkarni Asst.

Prof, CSE, KSSEM

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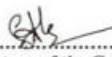
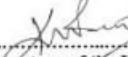



**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled "Machine Learning based model for prediction of Autism Spectrum Disorder" is a bonafide work carried out by:

<b>Dhanush Vasudevaraju</b>	<b>1KG19CS025</b>
<b>C.Ramesh Chandra</b>	<b>1KG19CS015</b>
<b>C.Sai Ranganath</b>	<b>1KG19CS016</b>
<b>Dinesh.M</b>	<b>1KG19CS026</b>

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Signature of the Guide	Signature of the HOD	Signature of the Principal
[Mrs. Sandhya A. Kulkarni]	[Dr. K Venkata Rao] HOD	[Dr. K. RAMA NARASIMHA] Principal/Director
	Department of Computer Science Engineering K.S School of Engineering & Management Bangalore-560109	K S School of Engineering and Management Bengaluru - 560 109

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A Project Work Phase-2 (18CSP83)

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## “Machine Learning based model for prediction of Autism Spectrum Disorder”

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IN

**COMPUTER SCIENCE AND ENGINEERING**

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Under the guidance of

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**Department of Computer Science & Engineering**




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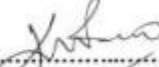
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<b>C.Ramesh Chandra</b>	<b>1KG19CS015</b>
<b>C.Sai Ranganath</b>	<b>1KG19CS016</b>
<b>Dinesh.M</b>	<b>1KG19CS026</b>

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.....  
**Signature of the Guide**

[Mrs. Sandhya A. Kulkarni]

  
.....  
**Signature of the HOD**

[Dr. K Venkata Rao]  
HOD

Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bangalore-560109

  
.....  
**Signature of the Principal**

**Dr. K. RAMA NARASIMHA**  
[Dr. K Rama Narasimha]  
Principal/Director

**K S School of Engineering and Management**  
Bengaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## **“SMART TRAFFIC MANAGEMENT SYSTEM FOR AMBULANCE”**

*Project Report submitted in partial fulfilment of the requirement for the award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

### **Submitted by**

Sunil M	(1KG19CS102)
V Yashaswini Naidu	(1KG19CS108)
Vignesh R	(1KG19CS115)
Vishwas P	(1KG19CS117)

Under the guidance of

Mrs. Amitha S  
Asst. Professor

Department of Computer Science & Engineering  
KSSEM, Bengaluru-560109



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2022 - 2023



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#15, Mallasandra, off. Kanakapura Road, Bengaluru - 560109

Department of Computer Science & Engineering

## CERTIFICATE

Certified that the Project Work Phase-II (18CSP83) entitled "Smart Traffic Management For Ambulance" is a bonafide work carried out by:

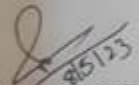
Sunil M (1KG19CS102)

V Yashaswini Naidu (1KG19CS108)


Vignesh R (1KG19CS115)

Vishwas P (1KG19CS117)

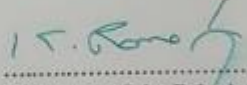
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[Mrs. Amitha S]

  
.....  
Signature of the HOD

[Dr. K Venkata Rao]

  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]

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Department of Computer Science Engineering  
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Dr. K. RAMA NARASIMHA  
Principal/Director  
K.S School of Engineering and Management  
Bengaluru - 560 109



# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## **“Develop a system for Electric Vehicle Recognition using Machine Learning”**

*Project Report submitted in partial fulfilment of the requirement for the award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Prarthna P Chhabria

1KG19CS067

Riya Singh

1KG19CS075

Under the guidance of

Mrs. Amitha S

Asst. Prof, CSE, KSSEM

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**Department of Computer Science & Engineering**



**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled "Develop a system for Electric Vehicle Recognition using Machine Learning" is a bonafide work carried out by:

**Prarthna P Chhabria**

**IKG19CS067**

**Riya Singh**

**IKG19CS075**

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

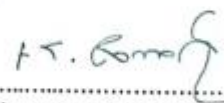
  
.....  
Signature of the Guide

[Mrs. Amitha S]

  
.....  
Signature of the HOD

[Dr. K Venkata Rao]  
HOD

Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bangalore-560109

  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]  
**Dr. K. RAMA NARASIMHA**  
Principal/Director  
K.S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## **“Design of an Electronic Device to Prevent On-Road Wheeling for Two Wheelers”**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

**Spoorthi P Shetty** 1KG19CS097

**Subhashini D** 1KG19CS098

**Vadde Sneha** 1KG19CS109

Under the guidance of  
Mrs Jayashubha J

Asst. Prof.

Department of Computer Science & Engineering  
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**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled “**Design of an Electronic Device to Prevent On-Road Wheeling for Two Wheelers**” is a bonafide work carried out by:

<b>Spoorthi P Shetty</b>	<b>1KG19CS097</b>
<b>Subhashini D</b>	<b>1KG19CS098</b>
<b>Vadde Sneha</b>	<b>1KG19CS109</b>

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by **Visvesvaraya Technological University, Belagavi** during the period of April 2022 to June 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

.....  
Signature of the Guide

[Ms. Jayashubha J]

.....  
Signature of the HOD

[Dr. K Venkata Rao]  
HOD

Department of Computer Science Engineering  
K.S School of Engineering & Management  
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.....  
Signature of the Principal

[Dr. K Rama Narasimha]

Dr. K. RAMA NARASIMHA  
Principal/Director

K.S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi – 590018



A Project Work Phase-2 (18CSP83)

Report on

## “Detection of Sarcoma in Bone”

*Project Report submitted in partial fulfilment of the requirement for the award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Prajwal S Shetty	1KG19CS063
Ranjita Govind Shastri	1KG19CS074
Varshitha V	1KG19CS112
Yashaswini M	1KG19CS118

Under the guidance of

Mrs. Nita Meshram

Asst. Prof, CSE, KSSEM

Department of Computer Science & Engineering

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## Department of Computer Science & Engineering




**KSSEM**  
K. S. SCHOOL OF ENGINEERING AND MANAGEMENT

### CERTIFICATE

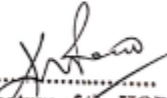
Certified that the Project Work Phase-II (18CSP83) entitled "Detection of Sarcoma in Bone" is a bonafide work carried out by:

Prajwal S Shetty	1KG19CS063
Ranjita Govind Shastri	1KG19CS074
Varshitha V	1KG19CS112
Yashaswini M	1KG19CS118

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

  
.....  
Signature of the Guide

[Mrs. Nita Meshram]

  
.....  
Signature of the HOD  
HOD

Department of Computer Science & Engineering  
K.S School of Engineering & Management  
Bangalore-560109

[Dr. K Venkata Rao]

  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]

Dr. K. RAMA NARASIMHA  
Principal/Director  
K S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-II (18CSP83)  
Report on

**“VOICE BASED EMAIL SYSTEM FOR VISUALLY IMPAIRED”**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

**BRUNDHA K**

**1KG19CS014**

**GAGANA M**

**1KG19CS030**

Under the guidance of

**Mrs. Nita Meshram**

**Assistant Professor**

**Department of Computer Science & EngineeringKSSEM,  
Bengaluru-560109**



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#15, Mallasandra, off. Kanakapura Road, Bengaluru – 560109  
2022 - 2023

**K. S. School of Engineering and Management**  
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**Department of Computer Science & Engineering**



**KSSEM**  
K. S. School of Engineering and Management

**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled "Voice based email system for visually impaired" is a bonafide work carried out by:


**BRUNDHA K**  
**GAGANA M**

**1KG19CS014**  
**1KG19CS030**


in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by **Visvesvaraya Technological University, Belagavi** during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-II Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

  
.....  
Signature of the Guide

[Mrs.Nita Meshram]

  
.....  
Signature of the HOD  
HOD  
Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bangalore-560109

[Dr. K Venkata Rao]

  
.....  
Signature of the Principal  
Dr. K. RAMA NARASIMHA  
Principal/Director  
K.S School of Engineering and Management  
Bengaluru - 560 109

[Dr. K Rama Narasimha]



# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## **“IMAGE BASED TOMATO LEAF DISEASE PREDICTION USING DEEP LEARNING”**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

SANDHYA B	(1KG19CS081)
TRIPURANENI CHANDRIKA	(1KG19CS107)
VALLERI MANISHA	(1KG19CS110)
VARSHA V	(1KG19CS111)

Under the guidance of  
Mrs. SUSHMITHA SURESH  
Assistant Professor  
Department of Computer Science & Engineering  
KSSEM, Bengaluru-560109



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Department of Computer Science & Engineering



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K. S. School of Engineering and Management

**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled "IMAGE BASED TOMATO LEAF DISEASE PREDICTION USING DEEP LEARNING" is a bonafide work carried out by:

SANDHYA B	(1KG19CS081)
TRIPURANENI CHANDRIKA	(1KG19CS107)
VALLERI MANISHA	(1KG19CS110)
VARSHA V	(1KG19CS111)

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavidingur during the period of April 2022 to June 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

*Sushmitha*

Signature of the Guide

[Mrs. Sushmitha Suresh]

*[Signature]*

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*[Signature]*

Signature of the Principal

Dr. K Rama Narasimha  
Principal/Director  
K S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-II (18CSP83)

Report on

## “Hazardous Gas Leakage Detection”

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Divya.V.P	1KG19CS028
Kantam Lalithya	1KG19CS041
M.C.Indu	1KG19CS044
Narmadha.M	1KG19CS046

Under the guidance of  
Mrs.Sushmitha Suresh  
Asst. Prof, CSE, KSSEM  
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#15, Mallasandra, off. Kanakapura Road, Bengaluru - 560109

**Department of Computer Science & Engineering**



**CERTIFICATE**

Certified that the Project Work Phase-II(18CSP83) entitled "**Hazardous Gas Leakage Detection**" is a bonafide work carried out by:

Divya.V.P	1KG19CS028
Kantam Lalithya	1KG19CS041
M.C.Indu	1KG19CS044
Narmadha.M	1KG19CS046

in partial fulfilment for VIII semester B.E., **Project Work in the branch of Computer Science and Engineering** prescribed by **Visvesvaraya Technological University, Belagavi** during the period of February 2023 to May 2023. **It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated.** The Project Work Phase-II Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

*Sushmitha*  
.....  
Signature of the Guide

[Mrs.Sushmitha Suresh]

*[Signature]*  
.....  
Signature of the HOD

[Dr. K Venkata Rao]  
HOD

Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bangalore-560109

*[Signature]*  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]

**Dr. K. RAMA NARASIMHA**

Principal/Director

K.S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590018



**A Project Work Phase-II (18CSP83)**

**Report on**

**"IOT & ML IN AGRICULTURE FOR OPTIMIZATION OF  
IRRIGATION AND APPLICATION OF PESTICIDES"**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

<b>ANUSHA S</b>	<b>1KG19CS006</b>
<b>MONICA N</b>	<b>1KG19CS053</b>
<b>MONISHA R</b>	<b>1KG19CS055</b>
<b>NISHCHITHA HEBBAR N S</b>	<b>1KG19CS060</b>

Under the guidance of

**Mrs. Meena G**

Asst. Professor

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Department of Computer Science & Engineering

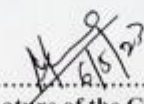


**CERTIFICATE**

Certified that the Project Work Phase-2 (18CSP83) entitled "IOT & ML IN AGRICULTURE FOR OPTIMIZATION OF IRRIGATION AND APPLICATION OF PESTICIDES" is a bonafide work carried out by:

Anusha S	1KG19CS006
Monica N	1KG19CS053
Monisha R	1KG19CS055
Nishchitha Hebbar N S	1KG19CS060

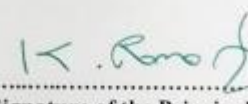
in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

  
.....  
Signature of the Guide

[Mrs. Meena G]

  
.....  
Signature of the HOD

[Dr. K Venkata Rao]

  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]

HOD  
Department of Computer Science Engineering  
K.S School of Engineering & Management  
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Dr. K. RAMA NARASIMHA  
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Bangaluru - 560 109

# Visvesvaraya Technological University

“Jnana Sangama”, Belagavi - 590018



**A Project Work Phase-II (18CSP83)**

**Report on**

**“VIRTUAL ASSISTANCE FOR POTHOLE DETECTION”**

*Project Report submitted in partial fulfilment of the requirement for the*

*award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

<b>CHANDANA K</b>	<b>1KG19CS018</b>
<b>DIVYA M</b>	<b>1KG19CS027</b>
<b>HOMADEEP G</b>	<b>1KG19CS038</b>
<b>JANHAVI C</b>	<b>1KG19CS039</b>

Under the guidance of

**Mrs. Meena G**

Asst. Professor

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Department of Computer Science & Engineering



**CERTIFICATE**

Certified that the Project Work Phase-2 (18CSP83) entitled "VIRTUAL ASSISTANCE FOR POTHOLE DETECTION" is a bonafide work carried out by:

Chandana K	1KG19CS018
Divya M	1KG19CS027
Homadeep G	1KG19CS038
Janhavi C	1KG19CS039

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

Signature of the Guide

[Mrs. Meena G]

Signature of the HOD

[Dr. K Venkata Rao]  
HOD

Signature of the Principal

[Dr. K Rama Narasimha]

Department of Computer Science Engineering  
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Principal/Director  
K S School of Engineering and Mananement  
Bengaluru - 560 109



# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## “Driver’s Behavior Recognition Using CNN”

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

M J Mohit Kumar	(1KG19CS045)
Sai Prasanna Kumar	(1KG19CS048)
Monish M	(1KG19CS054)
Nandish N	(1KG19CS059)

Under the guidance of

**Mrs. Prasanna N**

Assistant Professor

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# K. S. School of Engineering and Management

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## Department of Computer Science & Engineering



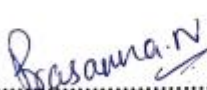
**KSSEM**

### CERTIFICATE


Certified that the Project Work Phase-II (18CSP83) entitled "**Driver's Behavior Recognition using CNN**" is a bonafide work carried out by:

<b>M J Mohit Kumar</b>	<b>1KG19CS045</b>
<b>Sai Prasanna Kumar</b>	<b>1KG19CS048</b>
<b>Monish M</b>	<b>1KG19CS054</b>
<b>Nandish N</b>	<b>1KG19CS059</b>

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by **Visvesvaraya Technological University, Belagavi** during the period of March 2023 to June 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.


  
.....  
Signature of the Guide

[Mrs. Prasanna N]

  
.....  
Signature of the HOD

Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bengaluru - 560109

[Dr. K. Venkata Rao]

  
.....  
Signature of the Principal

[Dr. K. Rama Narasimha]

**Dr. K. RAMA NARASIMHA**  
Principal/Director  
K S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-II (18CSP83)

Report on

## **“Recognition of Crop Pests Based on Deep Learning”**

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

HARSHITHA B C	1KG19CS036
SATHVIKA V	1KG19CS086
HEMASHREE G	1KG20CS402

Under the guidance of

Ms. AMBUJA K

Assistant Professor

Department of Computer Science & Engineering  
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**Department of Computer Science & Engineering**




**KSSEM**  
K. S. School of Engineering and Management

**CERTIFICATE**

Certified that the Project Work Phase-II (18CSP83) entitled "**Recognition of Crop Pests Based on Deep Learning**" is a bonafide work carried out by:

<b>HARSHITHA B C</b>	<b>1KG19CS036</b>
<b>SATHVIKA V</b>	<b>1KG19CS086</b>
<b>HEMASHREE G</b>	<b>1KG20CS402</b>


in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by **Visvesvaraya Technological University, Belagavi** during the period of April 2022 to June 2022. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

  
.....  
Signature of the Guide

[Ms. Ambuja .K]

  
.....  
Signature of the HOD  
HOD

Department of Computer Science and Engineering  
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Bengaluru-560109

  
.....  
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**Dr. K. RAMA NARASIMHA**  
Principal/Director

K. S. School of Engineering and Management

# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## **“Robust Prediction Of COVID-19 Using Supervised Machine Learning Algorithm”**

*Project Report submitted in partial fulfilment of the requirement for the award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

Submitted by

Ajay Kumar J	1KG19CS003
Bopanna M T	1KG19CS013
Gaurav V N	1KG19CS033
A Harshith	1KG20CS400

Under the guidance of

Mrs. Supriya Suresh

Asst. Prof, CSE, KSSEM

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KSSEM, Bengaluru-560109



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2022 - 2023

# K. S. School of Engineering and Management

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## Department of Computer Science & Engineering



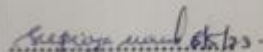
**KSSEM**

### CERTIFICATE

Certified that the Project Work Phase-II (18CSP83) entitled "**Robust Prediction Of COVID-19 Using Supervised Machine Learning Algorithm**" is a bonafide work carried out by:

Ajay Kumar J	1KG19CS003
Bopanna M T	1KG19CS013
Gaurav V N	1KG19CS033
A Harshith	1KG20CS400

in partial fulfilment for VII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by **Visvesvaraya Technological University, Belagavi** during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

  
Signature of the Guide

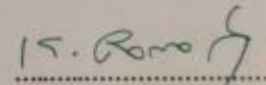
[Mrs. Supriya Suresh]

  
Signature of the HOD

[Dr. K Venkata Rao]

HOD

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K.S School of Engineering & Management  
Bangalore-560109

  
Signature of the Principal

[Dr. K Rama Narasimha]

Dr. K. RAMA NARASIMHA

Principal/Director

K S School of Engineering and Management  
Bengaluru - 560 109

# Visvesvaraya Technological University

Juana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## “Deep Learning Approach for 2D MRI Brain Tumor Segmentation”

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Saketh N	1KG19CS079
Sarvesh S Tenhalli	1KG19CS084
Shivaleela Desai	1KG19CS089
Sonu Kumari Rawal A	1KG19CS096

Under the guidance of

Mrs. Supriya Suresh

Asst. Prof, CSE, KSSEM

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## Department of Computer Science & Engineering

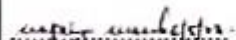


### CERTIFICATE

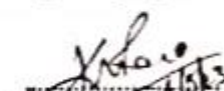
Certified that the Project Work Phase-II (18CSP83) entitled "Deep Learning Approach for 2D MRI Brain Tumor Segmentation" is a bonafide work carried out by

Saketh N	1KG19CS079
Narvesh S Tenihalli	1KG19CS084
Shivaleela Desai	1KG19CS089
Sonu Kumari Rawal A	1KG19CS096

in partial fulfillment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of April 2022 to June 2022. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.


  
Signature of the Guide

[Mrs. Supriya Suresh]

  
Signature of the HOD

[Dr. K. Venkata Rao]

HOD

  
Signature of the Principal

[Dr. K. Rama Narasimha]

Department of Computer Science Engineering  
K. S. School of Engineering & Management  
Bengaluru-560109

Dr. K. RAMA NARASIMHA  
Principal/Director  
K. S. School of Engineering and Management  
Bengaluru - 560 109



# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## “Classification and Analysis of Medical Images”

*Project Report submitted in partial fulfillment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Rakshith B N	1KG19CS071
Sathish Kumar S	1KG19CS085
Deepika P N	1KG19CS024
Suraksha Rachana	1KG19CS103

Under the guidance of

Mrs. Thejaswini M S

Asst. Prof, CSE, KSSEM Department of Computer Science & Engineering  
KSSEM, Bengaluru-560109



**KSSEM**

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2022 - 2023

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## Department of Computer Science & Engineering

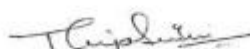


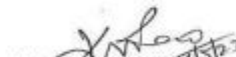
### CERTIFICATE

Certified that the Project Work Phase-II (18CSP83) entitled "**Classification and Analysis of Medical Images**" is a bonafide work carried out by:

<b>Rakshith B N</b>	<b>1KG19CS071</b>
<b>Sathish Kumar</b>	<b>1KG19CS085</b>
<b>Deepika P N</b>	<b>1KG19CS024</b>
<b>Suraksha Rachana</b>	<b>1KG19CS103</b>

in partial fulfillment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by **Visvesvaraya Technological University, Belagavi** during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-2 Report has been approved as it satisfies the academic requirements in the report of project work prescribed for the Bachelor of Engineering degree.

  
Signature of the Guide  
[Mrs. Thejaswini M S]

  
Signature of the HOD  
[Dr. K Venkata Rao]

  
Signature of the Principal  
Dr. K Rama Narasimha  
Principal/Director  
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Bengaluru - 560 109

HOD  
Department of Computer Science Engineering  
K.S School of Engineering & Management  
Bengaluru-560109

.....  
Signature of the Guide  
[Mrs. Thejaswini M S]

.....  
Signature of the HOD  
[Dr. K Venkata Rao]

.....  
Signature of the Principal  
[Dr. K Rama Narasimha]

# Visvesvaraya Technological University



A Project Work Phase-2 (18CSP83)

Report on

## “Fake Product Identification Using Blockchain”

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*  
**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

Submitted by

Mohit Singh	1KG19CS052
Sahil Bassan	1KG19CS078
S Manjot Singh	1KG19CS076
Prakrit Basnet	1KG19CS065

Under the guidance of  
Mrs. Thejaswini M S  
Asst. Prof, CSE, KSSEM  
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
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#15, Mallasandra, off. Kanakapura Road, Bengaluru – 560109  
2022 - 2023

# K. S. School of Engineering and Management

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## Department of Computer Science & Engineering

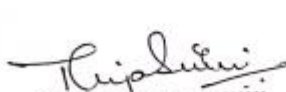


### CERTIFICATE

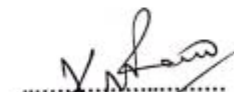
Certified that the Project Work Phase-II (18CSP83) entitled "Fake Product Identification Using Blockchain" is a bonafide work carried out by:

Mohit Singh	1KG19CS052
Sahil Bassan	1KG19CS078
S Manjot Singh	1KG19CS076
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in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by Visvesvaraya Technological University, Belagavi during the period of February 2023 to May 2023. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-II Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

  
.....  
Signature of the Guide

[Mrs. Thejaswini M S]

  
.....  
Signature of the HOD

[Dr. K Venkata Rao]

  
.....  
Signature of the Principal

[Dr. K Rama Narasimha]

**HOD**  
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# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phasc-2 (18CSP83)

Report on

## “Smart Shoe for the Blind”

*Project Report submitted in partial fulfilment of the requirement for the  
award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Damini K Devadiga	1KG19CS021
Deepa S Rao	1KG19CS022
Gauthami N.P	1KG19CS034
Mohammed Ameenulla Z	1KG19CS050

Under the guidance of

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**KSSEM**

### CERTIFICATE

Certified that the Project Work Phase-II (18CSP83) entitled "Smart Shoe for the Blind"

is a bonafide work carried out by:

<b>Damini K Devadiga</b>	<b>1KG19CS021</b>
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<b>Gauthami N.P</b>	<b>1KG19CS034</b>
<b>Mohammed Ameenulla Z</b>	<b>1KG19CS050</b>

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Signature of the Guide

[Dr. K Venkata Rao]

HOD

  
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Signature of the HOD

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# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP77)

Report on

## “Smart Agriculture System”

*Project Report submitted in partial fulfilment of the requirement for the award of the degree of*

**BACHELOR OF ENGINEERING**

IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

Sudharshan MS	1KG19CS099
Suresh Kumar S	1KG19CS104
TS Nandan	1KG19CS106
Varun Bhargava	1KG19CS113

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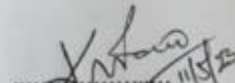
Certified that the Project Work Phase-I (18CSP77) entitled "**Smart Agriculture System**" is a bonafide work carried out by:

<b>Sudharshan MS</b>	<b>1KG19CS099</b>
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<b>TS Nandan</b>	<b>1KG19CS106</b>
<b>Varun Bhargava</b>	<b>1KG19CS113</b>

in partial fulfilment for VIII semester B.E., Project Work in the branch of Computer Science and Engineering prescribed by **Visvesvaraya Technological University, Belagavi** during the period of September 2022 to December 2022. It is certified that all the corrections and suggestions indicated for internal assessment have been incorporated. The Project Work Phase-II Report has been approved as it satisfies the academic requirements in report of project work prescribed for the Bachelor of Engineering degree.

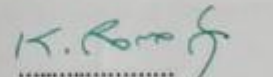
  
Signature of the Guide

[Mrs. Chandana VS]

  
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Department of Computer Science Engineering  
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# Visvesvaraya Technological University

Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)  
Report on

## “Early Diabetes Prediction using Machine Learning”

*Project Report submitted in partial fulfilment of the requirement for the award of the  
degree of*

**BACHELOR OF ENGINEERING**

IN

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Sharath Kumar N	1KG19CS087
Sumanth K Naik	1KG19CS101


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Signature of the Guide

[Ms. Ambuja K]

  
Signature of the HOD

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Jnana Sangama, Belagavi - 590018



A Project Work Phase-2 (18CSP83)

Report on

## “Helmet detection and number plate recognition”

*Project Report submitted in partial fulfilment of the requirement for the  
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IN

**COMPUTER SCIENCE AND ENGINEERING**

**Submitted by**

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Rakshith C K	1KG19CS072
Shreyas K	1KG19CS092
Sharath B G	1KG18CS100

Under the guidance of

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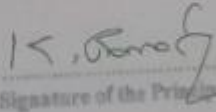
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