

# SRI SRINIVASA EDUCATIONAL AND CHARITABLE TRUST®

## SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to Visvesvaraya Technological University, Belagavi and Approved by AICTE, New Delhi)

(Accredited by NAAC with "A" grade) Accredited by NBA (CSE, ECE, EEE, ISE, ME)

(An ISO 9001:2015 & ISO 14001:2015 Certified)



Sl.No.	Batch. No.	USN No.	Student Name	Project Title	Guide
1	1	1SG19EC002	ABHISHEK VIDYADAR SHETT	CONCRETE CRACK DETECTION USING CNN	DR. PRAKASH JADHAV
2		1SG19EC054	MOHAMMED MAAZ HAMEED		
3		1SG19EC058	NITIKA KUMARI		
4	2	1SG19EC082	S RAVEESH KOTI	IOT BASED WHEEL CHAIR AND HOME AUTOMATION	PROF. AGALYA P
5		1SG19EC093	SHREYAS G RAJ		
6		1SG19EC096	SM FARAZ HUSSAIN		
7		1SG19EC099	SUBHASH BS		
8	3	1SG19EC005	AMITOJE SINGH	IOT BASED AUTOMATIC VEHICLE ACCIDENT ALERT SYSTEM FOR 4 WHEELER AS WELL AS 2 WHEELER	PROF. MANASA M G
9		1SG19EC053	MANYA UPADHYAY		
10		1SG19EC055	MOHAMMED MOULANA		
11		1SG19EC075	RAJAPU RISHIKESH		
12	4	1SG19EC065	PRAVEEN B R	ELECTRONIC NASAL MASK	PROF. MANASA M G
13		1SG19EC077	RANJITH S G		
14		1SG19EC090	SHIVAM KUMAR SHARMA		
15		1SG19EC105	SWAROOP S		
16	5	1SG19EC061	POORNIMA S	DESIGN AND IMPLEMENTATION OF SLEEP APNEA DETECTION SYSTEM	PROF. KALAVATHI S
17		1SG19EC072	RAHUL N		
18		1SG19EC086	SANJAY K		
19		1SG19EC102	SUMANTH C GOWDA		
20		1SG19EC015	BHOOMIKA N	AN EFFICIENT DEEP LEARNING FRAMEWORK	

Principal

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Bengaluru



21	6	1SG19EC041	INCHARA V	AN EFFICIENT DEEP LEARNING FRAME WORK FOR DISTRACTED DRIVER DETECTION	PROF. KALAVATHI S
22		1SG19EC049	LATHA T S		
23	7	1SG19EC088	SHASHANK R	INTELLIGENT WATER DISTRIBUTION AND MONITORING SYSTEM	PROF. VINUTHA C
24		1SG19EC089	SHIVAM KUMAR O		
25		1SG19EC080	ROHITH D G		
26	8	1SG19EC025	DEEPIKA P	SMART MEDICINE BOX FOR BLIND AND OLD AGE PEOPLE	PROF. GIRISH J R
27		1SG19EC038	HARSHITHA N		
28		1SG20EC409	SACHIN M J		
29		1SG20EC411	SHILPA S		
30	9	1SG19EC101	SUMANA M	DESIGN AND DEVELOPMENT OF MONITORING INCUBATOR USING IOT	DR. PRAKASH JADHAV
31		1SG19EC111	VANDHANA S		
32		1SG19EC017	BINDHU H C		
33	10	1SG19EC004	AKSHAY KUMAR HP	HAND GESTURER RECOGNITION CHATBOT FOR DISEASE PREDICTION AND TREATMENT RECOMMENDATION USING MACHINE LEARNING	PROF.SHOBHA S
34		1SG19EC063	PRATHIK R GOWDA		
35		1SG19EC070	KISHORE R		
36		1SG20EC404	HONNESH BABU PN		
37	11	1SG19EC062	PRASHANTH K B	MULTI TENANCY EV CHARGING STATION	PROF. RAVISHANKAR M N
38		1SG19EC066	PREETAM HEGDE		
39	12	1SG20EC404	MEGHANA H P	FOOD FRESHNESS MANAGEMENT SYSTEM USING IOT	DR. SHOBHA H
40		1SG20EC405	NANDITHA G		
41		1SG20EC407	PRAVEEN B		
42		1SG20EC408	PUSHPALATHA K R		
43	13	1SG19EC067	PREETI KULKARNI	MACHINE LEARNING TECHNIQUE FOR BREAST CANCER PREDICTION AND DIAGNOSIS	PROF. VEENA N
44		1SG19EC095	SINDHU S		
45		1SG19EC117	VISMAYA.B.V		
46		1SG19EC120	YASHASWINI S		
47		1SG19EC006	ANANYA. P		



48	14	1SG19EC028	DINESH. B	LI-FI TECHNOLOGY BASED PATIENT HEALTH MONITORING AND TRACKING SYSTEM	PROF. SHILPA V
49		1SG19EC040	HITAISHI. S		
50		1SG19EC092	SHIVANI. V		
51	15	1SG19EC076	RAKESH L	ATM FOR VISUALLY IMPAIRED PERSON	PROF. PRATIBHA P
52		1SG19EC083	SAGAR A		
53		1SG19EC084	SAI GANESH C S		
54		1SG19EC098	SRINIVAS N KAUSHIK		
55	16	1SG19EC013	BHAVANA N	SMART LIBRARY SORTING USING IMAGE PROCESSING	PROF. SUMA V SHETTY
56		1SG19EC014	BHAVANA P S		
57		1SG19EC045	KOKILA A S		
58		1SG19EC029	DIPTHI N		
59	17	1SG19EC024	DARSHAN PATEL	EMS: AN ENERGY MANAGEMENT SCHEME FOR GREEN IOT ENVIRONMENT	DR. PRAKASH JADHAV
60		1SG19EC051	MANJUNATHA M		
61		1SG19EC059	PK SHRIRAM		
62		1SG19EC060	PAVAN K S		
63	18	1SG19EC009	ANUSHKA S	DESIGN AND IMPLEMENTATION OF ASSISTIVE ROBOT FOR ELDERLY AND IMPAIRED PERSON	DR. A M NAGARAJ
64		1SG19EC026	DHANUSH GM		
65		1SG19EC027	DHANUSH V		
66		1SG19EC048	KUSHAL BHARADWAJ BA		
67	19	1SG19EC091	SHIVAM SHIVA	INTELLIGENT VIDEO SURVILENCE SYSTEM	DR. H C SATEESH KUMAR
68		1SG19EC074	RAHUL KUMAR YADAV		
69		1SG19EC106	TAPAN UPADHAYAY		
70		1SG19EC094	SHUBHAM PATHAK		
71	20	1SG19EC020	CHANDAN D	DETECTION OF ADULTRATION IN FRUITS USING MACHINE LEARNING	PROF. SHILPA V
72		1SG19EC035	HARSHAN GOWDA KH		
73		1SG19EC039	HEMANTH KUMAR L		
74		1SG19EC052	MANOJ H		



75	21	1SG19EC023	CHANDRIKA D	STOCK MARKET PREDICTION USING MACHINE LEARNING	PROF. RAVISHANKAR M N
76		1SG19EC033	GOURIPRIYA R		
77		1SG19EC037	HARSHITHA H G		
78		1SG19EC109	V VARSHINI		
79	22	1SG19EC007	ANIL KUMAR YADAV P	MULTIPURPOSE AGRICULTURAL ROBOT	PROF. SUGNYANI PATIL
80		1SG19EC011	AVINASH H M		
81		1SG19EC012	BHARGAV A		
82		1SG19EC044	KISHAN C S		
83	23	1SG19EC030	DIVYASHREE G K	DESIGN OF AN EFFICIENT CHARGE PUMP PHASE LOCK LOOP USING CMOS 90NM TECHNOLOGY	PROF. GIRISH J R
84		1SG19EC043	KAVANA T R		
85		1SG19EC022	CHANDRASHEKAR Y M		
86	24	1SG19EC112	VARSHA M	CNN BASED PRECODER AND COMBINER IN MM-WAVE MIMO SYSTEM	PROF. SHOBHA S
87		1SG19EC107	TARANUM BANU		
88		1SG19EC116	VINUTHA MJ		
89		1SG19EC069	PURUSHOTHAM R		
90	25	1SG20EC401	HARSHITH V	IOT BASED HEART DISEASE PREDICTION AND DIAGNOSIS MODEL FOR HEALTHCARE USING MACHINE LEARNING MODELS	DR. A M NAGARAJ
91		1SG20EC412	SUHAS S		
92		1SG20EC406	NIKHIL SS		
93		1SG19EC085	SANGEETH M		
94	26	1SG19EC100	SUCHARITHA M G	CNN BASED OBJECT RECOGNITION TO ASSIST VISUALLY IMPAIRED PEOPLE.	PROF. PRATIBHA P
95		1SG19EC110	VAISHNAVI U S		
96		1SG19EC115	VINUTHA H V		
97		1SG19EC104	SUSHMA M M		
98	27	1SG19EC097	SNEHARANI U	SMART SHOES	PROF. PADMAVATHI C
99		1SG19EC103	SUSHMA B O		
100		1SG19EC108	THANUSHREE G		
101		1SG19EC118	YAMUNA A C		



102	28	1SG19EC113	VIJAYAKUMAR S N	IOT BASED PROBING OF HIDDEN CAMERA USING RF SIGNALS.	PROF. SUMA V SHETTY
103		1SG20EC400	GOWTHAM S MAGAR		
104		1SG20EC403	LAKSHMISHA J P		
105		1SG20EC410	SANDEEP O		
106	29	1SG19EC034	HARISHGOWDA T R	BIOMETRICALLY SECURED ATM VIGILANCE SYSTEM	DR. H C SATEESH KUMAR
107		1SG19EC032	GIRISH REDDY S		
108		1SG19EC003	ADARSH GOWDA K R		
109		1SG19EC050	MANISH SHAH R		
110	30	1SG19EC073	RAHUL N	IOT BASED SMART MIRROR USING RASPBERRY PI.	PROF. RANJITHA R
111		1SG19EC078	RAVIKIRAN		
112		1SG19EC079	REVAYYA KABBURMATH		
113		1SG19EC114	VIKRAM PARASANAGOUDRA		
114	31	1SG19EC008	ANUSHA C	A MACHINE LEARNING METHODOLOGY FOR DIAGNOSING CHRONIC KIDNEY DISEASE.	PROF. PADMAVATHI C
115		1SG19EC018	BRUNDA G P		
116		1SG19EC019	BRUNDA P		
117		1SG19EC056	MONICA VALENTINA M		
118	32	1SG19EC016	BHUVANA K S	SKIN PIXEL DETECTION USING DEEP LEARNING	PROF. AGALYA P
119		1SG19EC031	GAGANA KUMARI N		
120		1SG19EC057	NIRUPAMA G		
121		1SG19EC071	RACHANA M		
122	33	1SG19EC087	SANKEERTH M	CROP PREDICTION USING NEURAL NETWORK	PROF. VEENA N
123		1SG19EC081	RITHVIK GOWDA H		
124		1SG19EC064	PRAVEEN A		
125		1SG19EC042	JEEVAN TV		

Project Coordinator

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HOD, Dept. of ECE



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

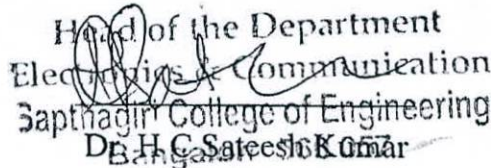
This is to certify that the project work entitled "**Concrete Crack Detection Using Image Pre-Processing and Deep Learning**" is a bonafide work carried out by

Abhishek Vidyadhar Shet	1SG19EC002
Mohammed Maaz Hameed	1SG19EC054
Nitika Kumari	1SG19EC058

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

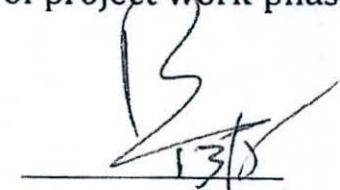


Dr. Prakash Jadhav  
Associate Professor

  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Bangalore-560057

Head of the Department

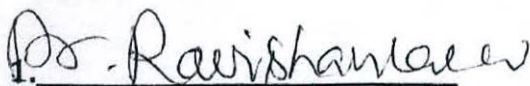
**Project Viva Voce**

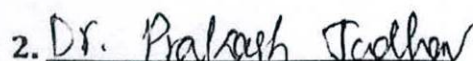


Dr. H Ramakrishna  
Principal

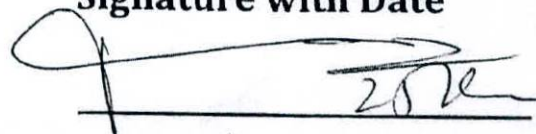
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Chikkasandra, Hesaraghatta Road  
Bangalore-560 057

**Name of Examiners**

1. 

2. 

**Signature with Date**







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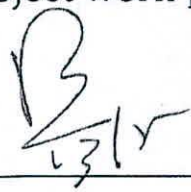
This is to certify that the project work entitled "**Development of wheel chair control system with home automation**" is a bonafide work carried out by

S Raveesh Koti	1SG19EC082
Shreyas G Raj	1SG19EC093
S M FARAZ Hussain	1SG19EC096
Subhash B S	1SG19EC099

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
Prof. Agalya P  
Guide

  
Head of the Department  
Department of Electronics & Communication Engineering  
Sapthagiri College of Engineering  
Bengaluru - 560 057  
Head of the Department

  
Dr. H Ramakrishna  
Principal

## Project Viva Voce

Name of Examiners

Signature with Date

1. Dr. Prakash Jadhav

Pradha 22/5/23

2. Dr. Ramakrishna

  
28/5



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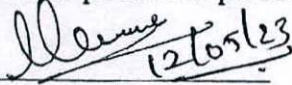


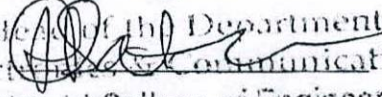
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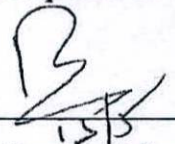
This is to certify that the project work entitled **IOT Based Automatic Vehicle Accident Alert System For 4 Wheelers and 2 Wheelers** is a bonafide work carried out by

Amitoje Singh	1SG19EC005
Manya Upadhyay	1SG19EC053
Mohammed Moulana	1SG19EC055
Rajapu Rishikesh	1SG19EC075

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
12/05/23  
Prof. Manasa M G  
Assistant Professor

  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Bengaluru - 560 057  
Head of the Department

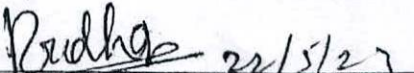
  
15/5  
Dr. H Ramakrishna  
Principal  
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Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057

### Project Viva Voce

#### Name of Examiners

1. Dr. Rakshak
2. Dr. Rakash Tadhor

#### Signature with Date

  
22/5/23  
  
22/5/23



# Sapthagiri College of Engineering,

B4

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**Department of Electronics & Communication Engineering**

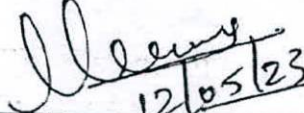


## CERTIFICATE

This is to certify that the project work entitled **Electronic Nasal Mask with Band** is a bonafide work carried out by

Praveen B R	1SG19EC065
Ranjith S G	1SG19EC077
Shivam Kumar Sharma	1SG19EC090
Swaroop S	1SG19EC105


in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
12/05/23

Prof. Manasa M G  
Assistant Professor

Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Dr. H. C. Sateesh Kumar

Head of the Department

  
Dr. H. Ramakrishna

Principal  
Sapthagiri College of Engineering  
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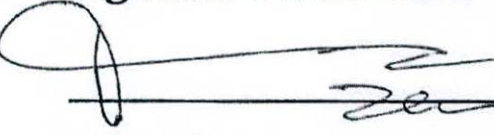
### Project Viva Voce

Name of Examiners

1. Dr. Rayhanur

2. Dr. Prakash Tadhan

Signature with Date

  
Dr. H. Ramakrishna 22/5/23

  
Principal  
Sapthagiri College of Engineering  
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Bangalore



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**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **Design and Implementation of Sleep Apnea Detection System** is a bonafide work carried out by

Poornima S	1SG19EC061
Rahul N	1SG19EC072
Sanjay K	1SG19EC086
Sumanth C Gowda	1SG19EC102

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 described for the degree.

Kalavathi S.

Kalavathi S

Guide

Dr. H C Sateesh Kumar

Dr. H C Sateesh Kumar

Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
**Project Viva Voce**

Dr. H Ramakrishna

Dr. H Ramakrishna

Principal  
Sapthagiri College of Engineering  
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**Name of Examiners**

**Signature with Date**

1. Dr. Jayashree

2. Dr. Prakash Jeehan

Dr. H Ramakrishna  
22/5/23



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**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled "**DRIVER DISTRACTION AND DROWSINESS DETECTION**" is a bonafide work carried out by

Bhoomika N	1SG19EC015
Inchara V	1SG19EC041
Latha T S	1SG19EC049

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Kalavathi S.

Prof. Kalavathi S  
Assistant Professor

Dr. H.C. Suresh Kumar  
Head of the Department  
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Dr. H Ramakrishna  
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### Project Viva Voce

#### Name of Examiners

1. Dr. Ravi Kumar
2. Dr. Prakash Tadkar

#### Signature with Date

Dr. Ravi Kumar 23/5/23  
Dr. Prakash Tadkar 23/5/23



# Sapthagiri College of Engineering,

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## CERTIFICATE

This is to certify that the project work entitled **Intelligent Water Distribution And Monitoring System** is a bonafide work carried out by

Rohith D G	1SG19EC080
Shashank R	1SG19EC088
Shivam Kumar O	1SG19EC089

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Vinutha C M.

Prof. Vinutha C M  
Assistant Professor

Dr. H C Sateesh Kumar

Dr. H C Sateesh Kumar  
Head of the Department

Dr. H Ramakrishna  
Principal

### Project Viva Voce

**Name of Examiners**

**Signature with Date**

1. Dr. Prakash Tadhe

Prakash 22/5/23

2. Dr. Ramesh An

Ramesh 22/5/23



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**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **A SMART MEDICINE BOX FOR BLIND AND OLD AGE PEOPLE** is a bonafide work carried out by

DEEPIKA P	1SG19EC025
HARSHITHA N	1SG19EC038
SACHIN M J	1SG20EC409
SHILPA S	1SG20EC411

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Prof. Girish J R  
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**Name of Examiners**

1. Dr. Ramesh Kumar
2. Dr. Prakash Tadhar

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22/3/23



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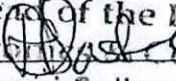
Bindhu H C                      1SG19EC017

Sumana M                      1SG19EC101

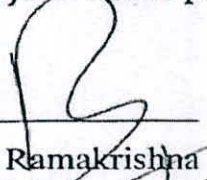
Vandhana S                      1SG19EC111

partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
Dr. Prakash Jadhav  
Guide

  
Head of the Department  
Sapthagiri College of Engineering  
Chikkasandra, Hesarachanda, Bengaluru - 560 057  
Head of the Department

Dr. H Ramakrishna

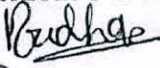

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesarachanda, Bengaluru - 560 057

### External Viva

Name of the examiners

1. Dr. Prakash Jadhav
2. Dr. Ramesh Kumar

Signature with date

 22/5/23  




# Sapthagiri College of Engineering,

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled "**Hand Gesture Recognition and Voice Conversion for Deaf and Aphonic People**" is a bonafide work carried out by

Akshay Kumar HP	1SG19EC004
Prathik R Gowda	1SG19EC063
R Kishore	1SG19EC070
Honnesh Babu PN	1SG20EC402

in partial fulfilment for the award of the degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during the internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Prof. Shobha S  
Associate Professor

Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Bengaluru-560057  
Dr. H C Sateesh Kumar  
Head of the Department

Dr. H Ramakrishna  
Principal

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560057

### Project Viva Voce

#### Name of Examiners

1. Dr. Prakash Tadha
2. Dr. Ramesh Kumar

#### Signature with Date

Bodha 22/05/23  
[Signature]



# Sapthagiri College of Engineering,

B 7

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **Multi Tenancy EV Charging Station** is a bonafide work carried out by

Prashanth K B

1SG19EC062

Preetam Hegde

1SG19EC066

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Prof. Ravi Shankara M N  
Guide

H.D. H.C. Sateesh Kumar  
Head of the Department  
Electronics & Communication Engineering  
Sapthagiri College of Engineering  
Bangalore - 560 057

Dr. H. Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hebbal Road  
Bangalore - 560 057

### Project Viva Voce

Name of Examiners

Signature with Date

1. Dr. Ravi Shankar M N

2. Dr. Prakash Jadhav

Dr. H. Ramakrishna  
23/5/23

Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hebbal



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**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **Food Freshness Management System Using IOT** is a bonafide work carried out by

MEGHANA HP

1SG20EC404

NANDITHA G

1SG20EC405

PRAVEEN B

1SG20EC407

PUSHPALATHA KR

1SG20EC408

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 described for the degree.

Dr Shobha Hugar

Guide

Dr. H C Sateesh Kumar  
Head of the Department

Head of the Department  
Sapthagiri College of Engineering  
Bengaluru - 560 057

Dr. H Ramakrishna  
Principal

Principal of Engineering  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057

**Project Viva Voce**

**Name of Examiners**

1. Dr. Ravipaula W

2. Dr. Prakash Tadhar

**Signature with Date**

  
23/5/23



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**Department of Electronics & Communication Engineering**

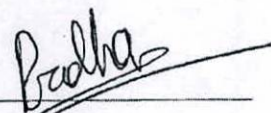


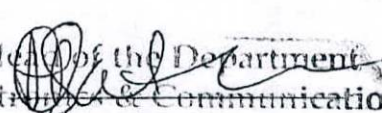
## CERTIFICATE

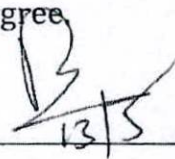
This is to certify that the project work entitled **"USING MACHINE LEARNING ALGORITHM FOR BREAST CANCER PREDICTION"** is a bonafide work carried out by

PREETI KULKARNI	[1SG19EC067]
SINDHU S	[1SG19EC095]
VISMAYA B V	[1SG19EC117]
YASHASWINI S	[1SG19EC120]

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 1 prescribed for the degree.

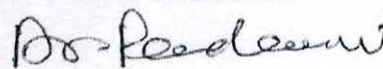
  
Prof. Veena N  
Guide

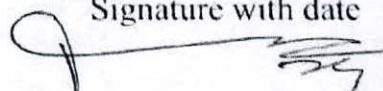
  
Head of the Department  
Sapthagiri College of Engineering  
Bengaluru-560057

  
Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesarachatta Road  
Bengaluru-560057

### External Viva

Name of the examiners

1. 
2. Dr. Prakash Jadhav

Signature with date  
  
23/5/23

  
Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesarachatta Main Road  
Bengaluru-560057



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**

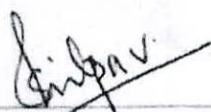


## CERTIFICATE

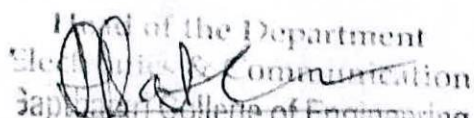
This is to certify that the project work entitled **Li-Fi Technology-Based Patient Health Monitoring \*and Heart Disease Prediction Using ML** is a bonafide work carried out by

ANANYA P	1SG19EC006
DINESH B	1SG19EC028
HITAISHI S	1SG19EC040
SHIVANI V	1SG19EC092


in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
Shilpa V

Assistant Professor

  
Dr. H. S. Suresh Kumar


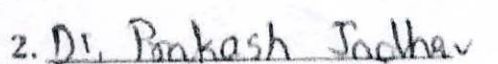
Head of the Department

  
Dr. H. Ramakrishna



Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesarghatta Road  
Bangalore- 560 057

### Project Viva Voce

Name of Examiners

1.   
Dr. Naveen
2.   
Dr. Pankash Jadhav

Signature with Date

  
  
23/1/23

  
Principal

Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesarghatta Main Road



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**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **ATM for Visually Impaired Person** is a bonafide work carried out by

Rakesh L

1SG19EC076

Sagar A

1SG19EC083

Sai Ganesh C S

1SG19EC084

Srinivas N Kaushik

1SG19EC098

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree

Prof. Prathibha P

Guide

Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering

Dr. H. C. Sateesh Kumar

Head of the Department

**Project Viva Voce**

Dr. H. Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road,  
Bangalore-560 057

Name of Examiners

1. Dr. Ramesh
2. Dr. Prakash Jadhav

Signature with Date

Beelha  
23/5/23



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**

SAPTHAGIRI  
College of Engineering  
Creating Tomorrow

## CERTIFICATE

This is to certify that the project work entitled **Library Book Sorting Using Image Processing** is a bonafide work carried out by

Bhavana N	1SG19EC013
Bhavana P S	1SG19EC014
Dipthi N	1SG19EC029
Kokila A S	1SG19EC045

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Suma V Shetty

Prof. Suma V Shetty

Guide

Head of the Department  
Dr. H C Sateesh Kumar

Dr. H C Sateesh Kumar

Head of the Department

Dr. H Ramakrishna

Dr. H Ramakrishna

Principal  
Principal

**Project Viva Voce**

**Name of Examiners**

1. Dr. Neelavar W

2. Dr. Prakash Taelhar

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bengaluru - 560 057

**Signature with Date**

Budha 23/5/23



# Sapthagiri College of Engineering, B17

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Accredited by NBA

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**




## CERTIFICATE

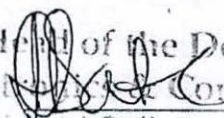
This is to certify that the project work entitled **Simulation of Wireless Sensor Network for Energy Management in IoT Environments** is a bonafide work carried out by

Darshan Patel	1SG19EC024
Manjunatha M	1SG19EC051
P K Shriram	1SG19EC059
Pavan K S	1SG19EC060

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.



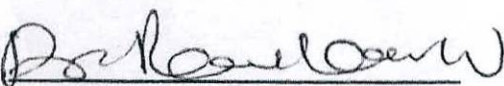
Dr. Prakash Jadhav  
Guide

  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Bengaluru - 560 057  
Dr. H C Sateesh Kumar  
Head of the Department

  
Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesarghatta Road  
Bengaluru-560 057

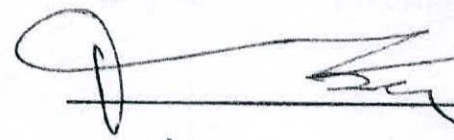
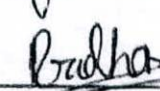
### Project Viva Voce

**Name of Examiners**

1. 

2. Dr. Prakash Jadhav

**Signature with Date**

  
  
23/5/23

  
Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesarghatta Main Road  
Bengaluru - 560 057



# Sapthagiri College of Engineering,

B18

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**

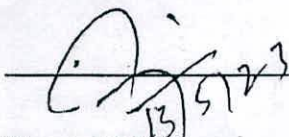


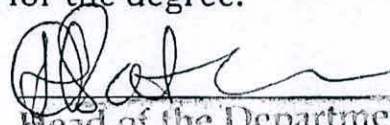
## CERTIFICATE

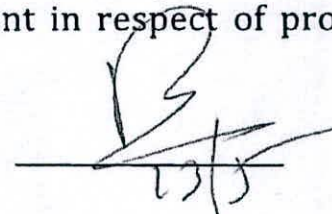
This is to certify that the project work entitled **DESIGN AND IMPLEMENTATION OF AN ASSISTIVE ROBOT FOR ELDERLY AND IMPAIRED PERSON** is a bonafide work carried out by

ANUSHKA S	1SG19EC009
DHANUSH G M	1SG19EC026
DHANUSH V	1SG19EC027
KUSHAL BHARADWAJ B A	1SG19EC048

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
Dr. A M Nagaraja  
Professor

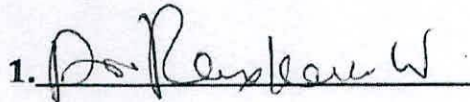
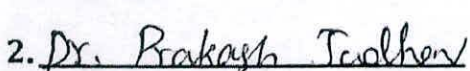
  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Head of the Department

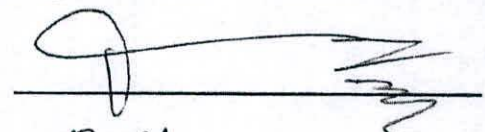
  
Dr. H Ramakrishna  
Principal

**Project Viva Voce**

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road.  
Signature with Date

**Name of Examiners**

1. 
2. 

  
Principal  
23/5/23

  
Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Road.



# Sapthagiri College of Engineering,

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **Project Title** is a bonafide work carried out by

Shivam Shiva	1SG19EC091
Rahul Kumar Yadav	1SG19EC074
Tapan	1SG19EC106
Shubham Pathak	1SG19EC094

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Dr. H C Sateesh Kumar  
Guide

Dr. H C Sateesh Kumar  
Head of the Department

Dr. H Ramakrishna  
Principal

### Project Viva Voce

Name of Examiners

1. Dr. A. H. Nagaraj

2. Dr. Shreesha Kalbar

Signature with Date

24/05/23



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**

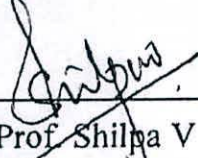


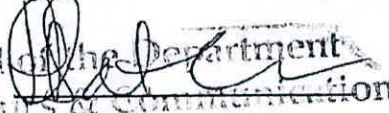
## CERTIFICATE

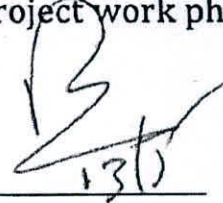
This is to certify that the project work entitled **Detection of Adulteration in fruits using Machine Learning and IoT** is a bonafide work carried out by

Chandan D	1SG19EC020
Harshan Gowda KH	1SG19EC035
Hemanth kumar L	1SG19EC039
Manoj H	1SG19EC052

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
Prof. Shilpa V  
Guide

  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Bangalore  
Dr. H C Sateesh Kumar  
Head of the Department

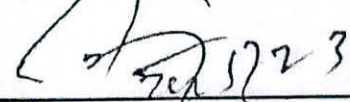
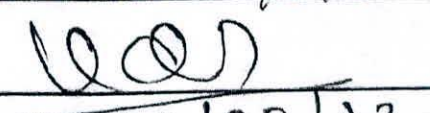
  
13/5  
Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057

### Project Viva Voce

Name of Examiners

1. Dr. A.M. Nagargi
2. Dr. Shreeha Kalkoor

Signature with Date

  
24/05/23  
  
24/05/23



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**

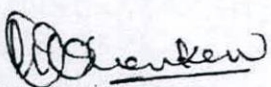


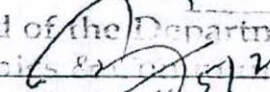
## CERTIFICATE

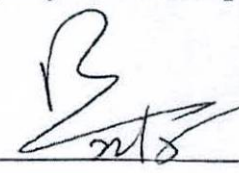
This is to certify that the project work entitled **STOCK MARKET PREDICTION USING MACHINE LEARNING** is a bonafide work carried out by

CHANDRIKA D	1SG19EC023
GOURI PRIYA R	1SG19EC033
HARSHITHA H G	1SG19EC037
V VARSHINI	1SG19EC109

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 described for the degree.

  
 Prof. Ravi Shankara M N  
 Associate Professor

  
 Head of the Department  
 Electronics & Communication Engineering  
 Sapthagiri College of Engineering  
 Bangalore- 560 057  
 Head of the Department

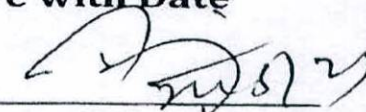
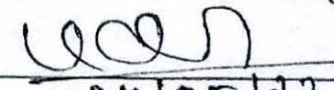
  
 Dr. H Ramakrishna  
 Principal  
 Sapthagiri College of Engineering  
 Chikkasandra, Hesaraaghatta Road  
 Bangalore- 560 057

### Project Viva Voce

#### Name of Examiners

1. Dr. A M. Nagam
2. Dr. Shreesha Kalkoor

#### Signature with Date

  
  
 24/05/23



# Sapthagiri College of Engineering,

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **MULTIPURPOSE AGRICULTURE ROBOT** is a bonafide work carried out by

ANIL KUMAR YADAV P

1SG19EC007

AVINASH HM

1SG19EC011

BHARGAV A

1SG19EC012

KISHAN C S

1SG19EC044

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Dr. Prakash Jadhav  
Associate Professor

Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering

Dr. H. C. Sateesh Kumar  
Head of the Department

Dr. H. Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesarghatta Road,  
Bangalore-560 057

### Project Viva Voce

#### Name of Examiners

1. Dr. A. M. Nayana
2. Dr. Shreesha Kalkoor

#### Signature with Date

  
  
24/05/23



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled "**Design of an Efficient Charge Pump Phase Lock Loop using CMOS 90nm Technology**" is a bonafide work carried out by

CHANDRASHEKAR Y M

1SG19EC022

DIVYA SHREE G K

1SG19EC030

KAVANA T R

1SG19EC043

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Prof. Girish J R  
Assistant Professor

Head of the Department  
Electronics & Communication Engineering  
Sapthagiri College of Engineering  
Bengaluru-560 057  
Head of the Department

Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road,  
Bangalore-560 057

### Project Viva Voce

#### Name of Examiners

1. Dr. Am Nigam
2. Dr. Shreesha Kalboor

#### Signature with Date

  
  
24/05/23



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **Deep CNN-based precoder and combiner Design using mm-wave MIMO system** is a bonafide work carried out by

Purushotham R	1SG19EC069
Taranum Banu	1SG19EC107
Varsha M	1SG19EC112
Vinutha M J	1SG19EC116

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Prof. Shobha S  
Associate Professor

Dr. H. C. Suresh Kumar  
Head of the Department  
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Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering

**Project Viva Voce**

Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057

**Signature with Date**

**Name of Examiners**

1. Dr. Anil Nigam
2. Dr. Shreesha Kalloor

24/10/23  
24/10/23



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**Department of Electronics & Communication Engineering**

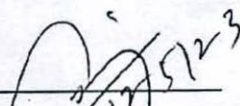


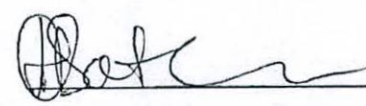
## CERTIFICATE

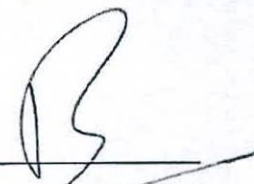
This is to certify that the project work entitled **Heart Disease Diagnostic IOT Model Using ML Technique** is a bonafide work carried out by

SANGEETH M	1SG19EC085
HARSHITH V	1SG20EC401
NIKHIL S S	1SG20EC406
SUHAS S	1SG20EC412

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
Dr. A M Nagaraja  
Guide



  
Dr. H C Sateesh Kumar  
Head of the Department  
Electronics & Communication  
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Dr. H Ramakrishna  
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Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057

**Name of Examiners**

1. Dr. A M. Nagaraja
2. Dr. Shreesha Kalboor

**Signature with Date**

  
  
24/05/23



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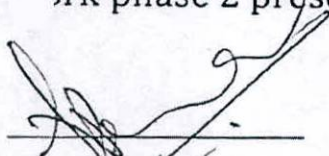


## CERTIFICATE

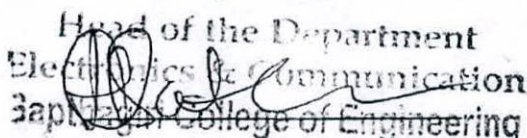
This is to certify that the project work entitled "**Virtual Assistance for Visually Impaired People Using Machine Learning**" is a bonafide work carried out by

Sucharitha M G	1SG19EC100
Sushma M M	1SG19EC104
Vaishnavi U S	1SG19EC110
Vinutha H V	1SG19EC115

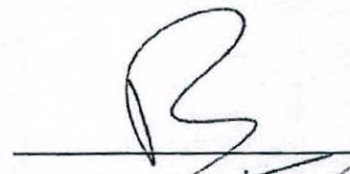
in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

  
Prathibha P

Guide

  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Dr. H C Sateesh Kumar

Head of the Department

  
Dr. H Ramakrishna  
Principal

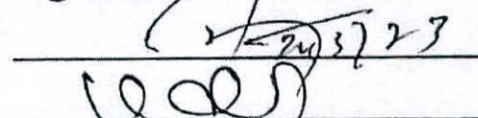
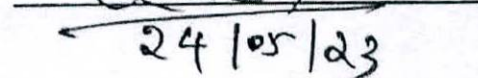
Sapthagiri College of Engineering  
Chikkasandra, Hesaraiahhatta Road  
Bangalore- 560 057

### Project Viva Voce

#### Name of Examiners

1. Dr. A.M. Nagary
2. Dr. Shreeha Kulkarni

#### Signature with Date

  
24/05/23  
  
24/05/23



# Sapthagiri College of Engineering,

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## CERTIFICATE

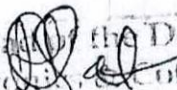
This is to certify that the project work entitled "**SMART SHOES FOR SAFETY AND SECURITY**" is a bonafide work carried out by

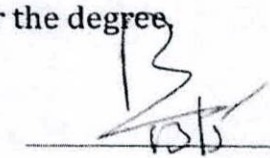
Sneharani U	[1SG19EC097]
Sushma B O	[1SG19EC103]
Thanushree G	[1SG19EC108]
Yamuna A C	[1SG19EC118]

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.



Prof. Padmavathi C  
Guide

  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Bengaluru-560057  
Dr. H C Satgish Kumar  
Head of the Department



Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesarghatta Road  
Bangalore-560057


### External Viva

Name of the examiners

1. Dr. A. M. Nagam

2. Dr. Shreeshha Kulkarni

Signature with date 27

  
27/05/23



# Sapthagiri College of Engineering,

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **IOT BASED PROBING OF HIDDEN CAMERA USING RF SIGNAL** is a bonafide work carried out by

VIJAYAKUMAR S N	1SG19EC113
GOWTHAM S MAGAR	1SG20EC400
LAKSHMISHA J P	1SG20EC403
SANDEEP O	1SG20EC410

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Suma V Shetty

Prof. Suma V Shetty

Assistant Professor

Dr. H. C. Sateesh Kumar

Dr. H. C. Sateesh Kumar  
Head of the Department  
Department of Electronics & Communication Engineering  
Sapthagiri College of Engineering  
Bengaluru - 560057

**Project Viva Voce**

Dr. H. Ramakrishna

Dr. H. Ramakrishna

Principal

Principal Engineering

Chikkasandra, Hesarghatta Main Road

Bengaluru - 560057

**Signature with Date**

**Name of Examiners**

1. Dr. A. M. Nagam

2. Dr. Shreesha Kalkoor

25/05/23

25/05/23

25/05/23

Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesarghatta Main Road  
Bengaluru - 560057

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**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **BIOMETRICALLY SECURED MULTI-ACCOUNT INTEGRATED ATM CARD** is a bonafide work carried out by

ADARSH GOWDA K R	1SG19EC003
GIRISH REDDY S	1SG19EC032
HARISH GOWDA T R	1SG19EC034
MANISH SHAH R	1SG19EC050

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

Dr. H C Sateesh Kumar

Guide & Head of the Department

Sapthagiri College of Engineering  
Bengaluru - 560 057.

Dr. H Ramakrishna

Principal  
Principal

Sapthagiri College of Engineering  
Chikkasandra, Hesarahatta Road,  
Bangalore-560 057

**Project Viva Voce**

**Signature with Date**

**Name of Examiners**

1. Dr. A M. Nagari
2. Dr. Shreesha Kalloor

  
25/05/23  
  
25/05/23



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**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **Smart Mirror Using Raspberry PI** is a bonafide work carried out by

Rahul N	1SG19EC073
Ravikiran	1SG19EC078
Revayya Kabburmah	1SG19EC079
Vikram P	1SG19EC114

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

*Ranjitha R* 13/05/23

Mrs. Ranjitha R  
Assistant Professor

*[Signature]*  
Head of the Department  
Sapthagiri College of Engineering  
Bengaluru - 560 057

*[Signature]* 13/5  
Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore- 560 057

### Project Viva Voce

#### Name of Examiners

1. Dr. A M. Nagargia
2. Dr. Shreesha Kulkoor

#### Signature with Date

*[Signature]* 25/05/23  
*[Signature]* 25/05/23



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Bengaluru-560057

Department of Electronics & Communication Engineering

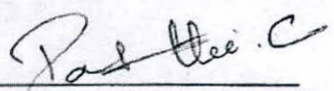


## CERTIFICATE

This is to certify that the project work entitled **Machine Learning Algorithms in Predicting Chronic Kidney Disease** is a bonafide work carried out by

Anusha C	1SG19EC008
Brunda G P	1SG19EC018
Brunda P	1SG19EC019
Monica Valentina M	1SG19EC056

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.



Prof. Padmavathi C

Assistant Professor

Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering

Dr. H. C. Sateesh Kumar

Head of the Department

Dr. H. Ramakrishna

Principal

Sapthagiri College of Engineering

Chikkasandra, Hesarghatta Road

Bangalore- 560 057

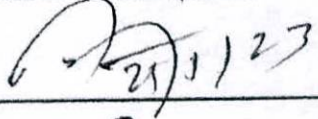
### Project Viva Voce


Name of Examiners

1. Dr. A. M. Nagary

2. Dr. Shreesha Kalkoor

Signature with Date



  
25/05/23



# Sapthagiri College of Engineering,

B32

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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**


SAPTHAGIRI  
COLLEGE OF ENGINEERING

## CERTIFICATE

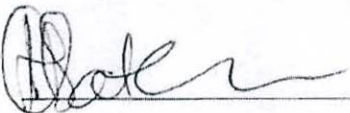
This is to certify that the project work entitled **DEEP LEARNING FRAMEWORK FOR SKIN DETECTION IN COLOR IMAGES** is a bonafide work carried out by

Bhuvana K S	ISG19EC016
Gagana Kumari N	1SG19EC031
Nirupama G	1SG19EC057

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

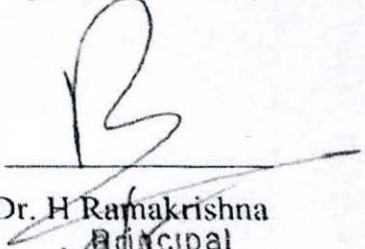
  
Agalya P

Associate Professor



Dr. H C Sateesh Kumar

Head of the Department

  
Dr. H Ramakrishna

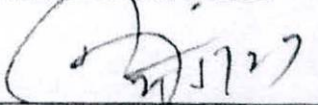
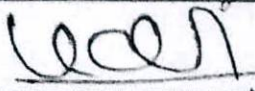
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hosaraghatta Road  
Bangalore-560057

### Project Viva Voce

Name of Examiners

1. Dr. A.M. Nagam
2. Dr. Shreeshha Kallcoor

Signature with Date

  
  
25/05/23

Principal  
Sapthagiri College of Engineering  
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Bangalore - 560057



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**Bengaluru-560057**

**Department of Electronics & Communication Engineering**



## CERTIFICATE

This is to certify that the project work entitled **CROP PREDICTION USING MACHINE LEARNING** is a bonafide work carried out by

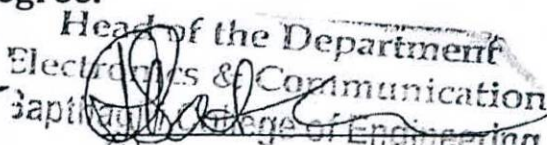
JEEVAN TV	1SG19EC042
PRAVEEN A	1SG19EC064
RUTHVIK GOWDA H	1SG19EC081
SANKEERTH M	1SG19EC087

in partial fulfillment for the award of degree of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work phase 2 prescribed for the degree.

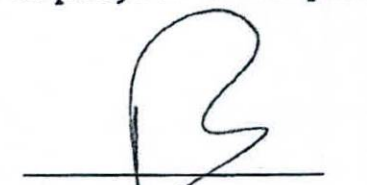


VEENA N

Guide

  
Head of the Department  
Electronics & Communication  
Sapthagiri College of Engineering  
Bengaluru - 560057  
Dr. H C Sateesh Kumar

Head of the Department

  
Dr. H Ramakrishna  
Principal  
Sapthagiri College of Engineering


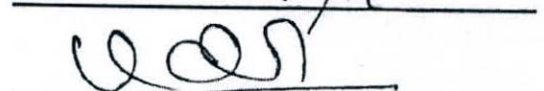
Chikkasandra, Hesarghatta Road  
Bangalore- 560 057


### Project Viva Voce

#### Name of Examiners

1. Dr. A.M. Nayani
2. Dr. Shreesha Kulkarni

#### Signature with Date

  
25/5/23  
  
25/05/23

  
Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, U.