

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)

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



Electronics and Communication Engieering

Batch IUSN	USN	NAME	PROJECT TITLE
	1SG18EC079	R. DIVYA	
-	1SG18EC077	PREKSHA PRAKASH	Generation of power to a vehicle using solar energy or its
1	1SG18EC095	SHILPA. A	own kinetic energy
	1SG18EC088	SAMREEN KAUSAR	
	1SG18EC063	NITHIN RS	
c	1SG18EC111	VANDANA G	A real time Dot hale detection and clearence robat
٧	1SG18EC108	ULLAS HP	
	1SG18EC117	VINAY HS	
	1SG18EC010	ARCHANA.D	
8	1SG18EC002	AISHWARYA KATARE	A blind stick navigator with Braille system and obstacle detection for visually and hearing impaired persons
	1SG18EC007	APOORVA YJ	
	1SG18EC030	DUSHYANTH H Y	
7	1SG18EC046	KIRAN KUMAR D	Hiiman Image Cantioning iising Deen Learning
t	1SG18EC080	RAKSHITH GS	indian mage capuomis asmis peer reasmis
	1SG18EC026	DEVANKIT	
	1SG18EC023	DEEPA B	Sapthag sats, Chikk
•			

Chikkasandra, Hesaraghatta Mai Bengaluru - 560 057

																			13	Benga		_
Driver dormant Monitoring system to alert fatal accidents	using image processing			Crown Monogenent in Dublic Transmort	CIOWA IMALIASCILICIA III I ADIIC II ALISPOIL			Implementation of Abstractive Summarization & translation	using deep learning technique		Design & Development of IC sorting and dispensing system				Flood and earthquake detection and alert using IOT technology				Automatic floor cleaning Robot using Arduino and Ultrasonic Sensor			
HARSHITHA V	LAVANYA N	MEGHA S	SHRADDHA VARIJAKSHA	SHILPASHREE S R	POOJA G D	VARSHINI R	AKARSH B A	DEEPAK K	L VISHNU VARDHAN REDDY	HEMANTH H M	ABHISHEK R	ASHWIN K	ВНАКАТН К	HEMANTH K	SELVA KUMAR B	SHARATH K V	VIKAS B S	SOURAV KUMAR SINGH	DIVAKAR V	GANGADHAR GM	GIREESHA K	TEJA K R
1SG18EC037	1SG18EC049	1SG18EC058	1SG18EC098	1SG18EC096	1SG18EC068	1SG18EC112	1SG18EC003	1SG18EC024	1SG18EC051	1SG18EC038	1SG18EC001	1SG18EC012	1SG18EC015	1SG18EC039	1SG18EC090	1SG18EC091	1SG18EC116	1SG18EC101	1SG18EC028	1SG18EC032	1SG18EC034	1SG18EC043
Ц	n		6 18 18 18 18 18 18 18 18 18 18 18 18 18						0	0			o	n		10 10 11 11 11 11 11 11						

College of Engineeri ndra, Hearaghatta Main Ra ngaluru - 560 057

		_		bo		\neg				\neg				Т				V '	3	Sengal		\neg
	Multipurpose agriculture robot			Design and analysis of different SRAM cell Topologies using	CMOS and FinFET Technologies			Smart Cradle system				- Forest monitoring system				Design of 5G base band filter decimator unit			Sapthagin	14/5, Chiki an intelligent nacking system for E- commerce		
KHUSHI SINGH	LAVANYA B	M AKSHAY KAMATH	K SHREYAS	JAYANTH R S	HARE KRISHNA	KUMAR G	NIKHIL UMAPATI	PRAJWAL P	PRATEEK. J. H	TARUN KUMAR G	VISHAL N	SHASHANK DR	SHARATH KUMAR BG	ANAND V	HAMSITHA B	LIKHITHA G	MONISHA R	ARATHI M	HARSHA RL	NITHISH R	PAVAN KUMAR G V	UJWAL S
1SG18EC045	1SG18EC048	1SG18EC054	1SG18EC044	1SG18EC042	1SG18EC036	1SG18EC047	1SG18EC062	1SG18EC071	1SG18EC074	1SG18EC105	1SG18EC120	1SG18EC093	1SG18EC092	1SG18EC005	1SG18EC035	1SG18EC053	1SG18EC059	1SG18EC009	1SG17EC117	1SG18EC065	1SG18EC067	1SG18EC107
	11 12 11 11 11 11 11 11 11 11 11 11 11 1				13	CI			7	ţ			Д.	61			71	07				

Principal
College of Engineerin
Idra, Hesaraghatta Main Ros

1SG18EC008 APURVA M SHET	APURVA M SHET		
1SG18EC020 CHANDANA V	CHANDANA V		FPGA Implementation of EXUDATE detection in FUNDUS
1SG18EC025 DEEPIKA U M	DEEPIKA U M		Images
1SG18EC031 G.MEGHASHREE			
1SG18EC027 DHANUSHREE L	OHANUSHREE L		
1SG18EC050 LAVANYA R	AVANYA R		VLSI Implementation for low power high speed DAC
1SG18EC066 PARVATHY R	ARVATHY R		
1SG18EC041 JAYANTH K HOLALKERI	JAYANTH K HOLALI	KERI	
1SG18EC055 MANASA DEV G J			Design & Performance analysis of 8*8 NOC for high traffic &
1SG18EC060 NAGESH R SHANBHAG	NAGESH R SHANBI	IAG	streaming application
1SG18EC056 MANOJ MAHADEV I	MANOJ MAHADEV I	EV BIRADAR	
1SG18EC110 VAISHNAVI P B	/AISHNAVI P B		
1SG18EC069 POOJITHA S B	OOJITHA S B		FPGA Implementation of high speed lowenergy RNS based
1SG18EC099 SHREYA S	SHREYA S		reconfigurable FIR filer
1SG18EC109 UME E SAFA	JME E SAFA		
1SG18EC061 NIKHIL M KUMAR	VIKHIL M KUMAR		
1SG18EC094 SHASHANK S	SHASHANK S		Android controlled wild life observation robot
1SG19EC414 RAKSHITH D	SAKSHITH D		
1SG19EC405 DEEPAK N	DEEPAK N		
1SG19EC409 IMDAD HUSSAIN	MDAD HUSSAIN		Virtual doctor obstacle detection
1SG19EC412 NAVEEN H R	VAVEEN H R		Sapt (4/5,
1SG19EC418 YASHWANTH KUM	YASHWANTH KUM	JMAR M	
1SG18EC057 MEDA. ABHIRAM SAI	MEDA. ABHIRAM	SAI	

agiri College of Engin likasandra, Hesaraghatta Mi Bengaluru - 560 057

Principal

													C	2	Principal	Sapthagiri College of Engines 14/5, Chickasandra, Hesaraghatta Main	Bengaluru - 560 057					
10T hased Hydronomics	101 based riyaropomes			Controlled environment for protection of crops				Automatic solar powered grass cutter incorportated with	alphabet printing and pesticide sprayer		Design and Implementation of neural network on FPGA using verilog			Implementation of machine learning frame work for detecting cyber attack in online banking				Metal Detector robotic vehicle operated by android application				
YOGEESH YR	SUMA G	VIDYA KN	AMULYA N D	BINDUSHREE M G	CHAITHANYA D R	DIVYA R	VINAY P	VINAY PRASAD M	SUJAN S	SWAGAT SHREYASH	RESHMA S HEGDE	SHIVAKUMAR S	VARUN L	SAKSHI PAI B	BHARATH K	CHETAN B A	DARSHAN J	JASHWANTH V	BHARGAVI TC	ASHWINI B N	CHANDANA C B	ARCHANA H K
1SG18EC122	1SG18EC103	1SG18EC115	1SG19EC400	1SG19EC402	1SG19EC403	1SG19EC406	1SG18EC118	1SG18EC119	1SG18EC102	1SG18EC104	1SG18EC083	1SG18EC097	1SG18EC113	1SG18EC086	1SG18EC014	1SG18EC021	1SG18EC022	1SG18EC040	1SG18EC016	1SG18EC013	1SG18EC019	1SG18EC011
	23 24					C III	C7			26 11				27				28				

Smart trolley automatic shopping billing Smart advertising systems in modern public transport Solar Pwered wheel chair with voice controller for physically challanged persons Design and Implementation of images and video processing application using xilinx on FPGA Sapthagri Callanged processing application Assistance for Blind and Visually Impaired People People	1SG18EC006 ANANYA N YADAV	ANYA N YADAV	02	Smart mirror with innovative features
IOT based smart water purification system Smart trolley automatic shopping billing Smart advertising systems in modern public transpor Solar Pwered wheel chair with voice controller for phy challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Mavigation Assistance for Blind and Visually Impairee People	1SG18EC033 GEETHA N F 1SG18EC085 SAIKRISHNA M	KRISHNA M		
Smart trolley automatic shopping billing Smart advertising systems in modern public transpor Challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impairee People	1SG18EC082 RAKSHITHA S ACHARYA	KSHITHA S ACHARY.		OT based smart water mirification system
Smart trolley automatic shopping billing Smart advertising systems in modern public transpor Solar Pwered wheel chair with voice controller for phy challanged persons Design and Implementation of images and video proc application using xilinx on FPGA Navigation Assistance for Blind and Visually Impairee People	1SG18EC073 PRAMODH N	AMODH N	•	ogged single water purification of section
Smart trolley automatic shopping billing Smart advertising systems in modern public transpor challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG18EC070 BADIGER	DIGER		
Smart trolley automatic shopping billing Smart advertising systems in modern public transpor challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG18EC078 PREMSAGAR B L	EMSAGAR B L		
Smart advertising systems in modern public transport advertising systems in modern public transport challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG18EC087 SAMARTH K	MARTH K		Smart trolley automatic shonning hilling
Smart advertising systems in modern public transpor challanged wheel chair with voice controller for phy challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG18EC100 SHREYAS S	REYAS S		oniai troney automate such purs summs
Smart advertising systems in modern public transpor challanged wheel chair with voice controller for phy challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG18EC106 THEJAS S	EJAS S		
Smart advertising systems in modern public transpores of the solar Pwered wheel chair with voice controller for phy challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC401 ASHA K R	HA K R		
Solar Pwered wheel chair with voice controller for phy challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC411 MEGHANA	GHANA	3 2	Smart advertising systems in modern public transport
Solar Pwered wheel chair with voice controller for phy challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC417 THANUJA L	ANUJA L		
Solar Pwered wheel chair with voice controller for phy challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC410 MANU K M	INU K M		
challanged persons Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC407 DORESWAMY V B		0,1	Solar Pwered wheel chair with voice controller for physically
Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC413 PRATHAP B R	ATHAP B R		challanged persons
Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC415 RANGANATH M	NGANATH M		
Design and Implementation of images and video procapplication using xilinx on FPGA Navigation Assistance for Blind and Visually Impaired People	1SG19EC404 DARSHAN GOWDA S	RSHAN GOWDAS		
Sapthagri 14/5, Chikkas Navigation Assistance for Blind and Visually Impaired People	1SG19EC408 HARSHA VARDHANA K V			Design and Implementation of images and video processing application using xilinx on FPGA
4/5, Chiki	1SG18EC076 PRAVEEN N	AVEEN N		
Navigation Assistance for Blind and Visually Impaired People	1SG17EC065 PRATEEK R	ATEEK R		14/5, Chikin
People	1SG17EC070 RAKSHITHA G N	KSHITHA G N		Navigation Assistance for Blind and Visually Impaired
	1SG18EC404 DEEPAK G KRISHNAN	EPAK G KRISHNAN		

Principal College of Engineer andra, Hesaraghatta Main R Bengaluru - 560 057

		Dire detection & extingnich neing DIP	The detection is comigation assuing the			O Tooland	Solal Floor Cleaner			Indoor Plants Recommedation System to Improve Air	Quality			New generation wating mochine for convinient evetem	INCW SCHOLARIOH VOLLIS MACHINIC IOI CONVINCIN SYSTEM		Design and Implementation of Automated Security System for Industry and Campus
ANURAG G	ASHUTOSH TIWARI	ASHUTOSH YADAV	NANDAN N	KISHAN R	RANBIR KUMAR SINGH	NIHARIKA RH	SHUBHAM KUMAR	SPOORTHY	PUNYASHREE G	KARTHIK S ARKASALI	YESHWANTH RAO B N	SUNITHA.MU	SANTHOSH G	MANOJ R	THEERTHAPRASAD T	ASHA E	VINAY R
1SG18EC400	1SG16EC011	1SG17EC014	1SG16EC058	1SG17EC045	1SG16EC087	1SG17EC059	1SG15EC103	1SG16EC128	1SG18EC412	1SG18EC409	1SG18EC417	1SG18EC414	1SG18EC413	1SG18EC411	1SG18EC415	1SG18EC402	1SG17EC424
	36 18 18 18 18 18 18 18 18 18 18 18 18 18					38 1SC 1SC 1SC					40						

HOD, ECE

Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Roze

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Rechargable electric bicycle with its own kinetic energy is a bonafide work carried out by

> Preksha. 1SG18EC077 R Divya 1SG18EC079 1SG18EC088 Samreen Kausar Shilpa A 1SG18EC095

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Dr. Sudha M S

Dr. H & Sateesh Kumar

Guide

Head of the Department Head of the Department

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, **Electronics & Communication**

Sapthagiri College of Engineering

External Viva

Bangalghata60wh7date

Name of the examiners

incipal

Dr. H Rangairicipal

Bangalore-560 057

0

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled A Real-time Pot Hole Clearance and Detection Robot is a bonafide work carried out by

> 1SG18EC062 NITHIN RS ULLAS H P 1SG18EC108 VANDAN 1SG18EC111 1SG18EC117 VINA

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Dr. Prakash Jadhay

Dr. H C Sateesh Kumar

Dr. H. Ramakrishna

Associate Professor

Head of the Rengularitmen

Bangalore :560 057

Principal

Electronics & Communication Sapthagiri College of Engineers Sapthagiri College of Engineeria likkasandra, Hesaraghatta

Bangalore-560 057

External Viva

Name of the examiners

5340 24A

Signature with date

Principal Sapthagid College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to VisvesvarayaTechnological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled A BLIND STICK NAVIGATOR WITH OBSTACLE DETECTION FOR VISUALLY AND HEARING IMPAIRED PERSONS is a bonafide work carried out by

Aishwarya Katare

1SG18EC002

Apoorva Y I

1SG18EC007

Archana D

1SG18EC010

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagaviduring the year 2021-22. 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 prescribed for the degree.

Dr. H C Satesh Kumar Electronics & Communication Saidhaghi Wooderfethe Preantments

External Bangalore 560 057.

Dr. H Ramakrishna

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

Name of the examiners

Principal

Sapthagirl College of Engineering 14/5, Chikkasendra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "Human Image Captioning using Deep Learning" is a bonafide work carried out by

DEVANKIT	1SG18EC026
DUSHYANTH H Y	1SG18EC030
KIRAN KUMAR D	1SG18EC046
RAKSHITH G S	1SG18EC080

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Dr. H C Sateesh Kumar

Guide and Head of the Department ectronics & Communication Sapthagiri College of Engineering

External Papgalor 560 057

Name of the examiners

SSUL BUD

Dr. H Bamakris

Sapthagiri Collegenbf Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057

Signature with date

Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 067

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

NAAC Accredited with 'A' Grade

Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "DRIVER DORMANT MONITORING SYSTEM TO AVERT FATAL ACCIDENTS USING IMAGE PROCESSING" is a bonafide work carried out by

DEEPA B 1SG18EC023
HARSHITHA V 1SG18EC037
LAVANYA N 1SG18EC049
MEGHA S 18EC058

in partial fulfillment for the award of degree of *Bachelor of Engineering in Electronics & Communication Engineering* of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Dr. Prakash Jadhav

Guide

Dr. of af the Department

Dr. of af the Department

Electronics

Electronics

Bangalor 560 057

G Chikkasandra, Hasaraghatta Road, Bangalore- 560 057

External Viva

1 p-Agaya

2. 8-54h 2 WV

Name of the examiners

adda/

Signature with date

Principal
Sapthagirl College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

Sapth Build Renegation Engineering

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Automated Crowd Management in Public Transport is a bonafide work carried out by

POOIA G D 1SG18EC068 SHILPASHREE S R 1SG18EC096 SHRADDHA VARUAKSHA 1SG18EC098 VARSHINIR 1SG18EC112

in partial fulfillment for the gree of Bachelor of Engineering in Electronics & Communication neering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Associate Professor

Head of the Department

Printrincipal

Electronics & Communicatio apthagiri College of Engineering Sapthagiri College of EngineeringChikkasandra, Hesaraghatta Road,

External Viva

Name of the examiners

Bangalor 560 057.

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

NAAC Accredited with 'A' Grade

Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Implementation of Abstractive Summarization is a bonafide work carried out by

Akarsh B A	1SG18EC003
Deepak K	1SG18EC024
Hemanth H M	1SG18EC038
L Vishnu Vardhan Reddy	1SG18EC051

in partial fulfillment for the award of degree of *Bachelor of Engineering in Electronics & Communication Engineering* of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Retti C

Prof. Padmavathi C

Guide

Dr. H C Sateesh Kumar

Head of the Department

Dr. H Ramakrishna

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

External Viva

Name of the examiners

1 P. Agaly.

2. SSHINHA

Signature with date

2 20/01 n

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "Design and Development of IC Sorting, Testing and Dispensing System" is a bonafide work carried out by

Abhishek R

1SG18EC001

Ashwin K

1SG18EC012

Bharath K

Hemanth K

1SG18EC015 1SG18EC039

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Veena N

Dr. H C Sateesh Kumar

Assistant Professor

Head of the Department

Head of the Department

Sapthagiri College of Engineering Bangigtonur 60il Flate

Dr. H Ramakrishna

Pfincipal

Principal

Electronics & Communication Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

External Viva

Name of the examiners

1. Dr. Prakagh Tuelhow

2. Dr. Sudle, Mg

Sapthagirl College of Engineering Rrineipal 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Design of flood and earthquake detection system using IoT Technology is a bonafide work carried out by

Selva Kumar B	1SG18EC090
Sharath K V	1SG18EC091
Sourav Kumar Singh	1SG18EC101
Vikas B S	1SG18EC116

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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

Dr. H Ramakrishna

Guide

Head of the Department

Sapthagiri College of Engineering Head of the Department Chikkasandra, Hesaraghatta Road. Electronics & Communication Bangalore-560 057

External Viva

Sapthagiri College of Engineering

1. Do Poakosh Toolhow Banginaturs or it of the

2. Dr. Sudlia M.S

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Automatic and Manual Floor Cleaning Robot Using Arduino and Ultrasonic Sensor is a bonafide work carried out by,

Divakar V	1SG18EC028
Gangadhar G M	1SG18EC032
Gireesha K	1SG18EC034
Teia K R	1SG18EC043

f degree of Bachelor of Engineering in in partial fulfillment for the Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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

prescribed for the degree.

Dr. A M Nagaraja

Professor (Guide)

Dr. HC Sateesh Kumar

Head of the Department

Sapthagin Codege of Engineering Chikkasandraçidəsaraqhatta Road,

Bangalore-560 057

External Viva

Name of the examiners

Head of the Department Electronics & Communication Sapthagianethiege the latineering

1 Dr. Prakayh Tacho 2. Dr . Sudlia . M.

Bangood 560 057

Principal Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Multipurpose Agricultural Robot is a bonafide work carried out by

1SG18EC045 Khushi Singh 1SG18EC048 Lavanya B 1SG18EC054 M Akshay Kamath

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological tified that all the suggestions University, Belagavi during the year 2021 porated in the report and indicated during internal assessment in respect of project work this report satisfies the academic rec prescribed for the degree.

Dr. Prakash Jadhav

Dr. H C Sateesh Kumar

Dr. H Ranzakrishna Principal

Associate Professor

External Viva

Head of the Department

Principal

Electronics & Communication

Bapthagiri College of Engineeringapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

Name of the examiners Bangsigharde with date

Dr. Sudla M.S

Brindpal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Smart Cradle System is a bonafide work carried out by

Nikhil Umapati	1SG18EC062
Prajwal P	1SG18EC071
Prateek J H	1SG18EC074
Tarun Kumar G	1SG18EC105

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Prathibha P

Dr. H C Sateesh Kumar

Assistant Professor

Head of the Department Head of the Department Principal. Principal

Dr. H Ramakrishna

Electronics & CommunicationSapthaglri College of Engineering

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

External Viva

Name of the examiners

1 Dr. Prakash Jacoba |

2. Dr. Sudlea M-S =

Bangalor 560 057. Signature with date

Principal Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "An Intelligent Forest Monitoring System Based on IoT" is a bonafide work carried out by

Anand V 1SG18EC005 Sharath Kumar B G 1SG18EC092 Shashank DR 1SG18EC093 Vishal N 1SG18EC120

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Shobha Hugar

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Guide

Head of the Department

Principal
Sapthagiri College of Engineeing

Electronics & Communication Chikkasandra, Hesaraghatta Road, Head of the Department

3apthagiri College of Engineering

External Viva

Ban Bagatufe Will date

Name of the examiners Dr. Prakerh Talker

2. Dr. Sudlier. M.S

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade, Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "DESIGN AND IMPLEMENTATION OF AN EFFICIENT 5G BASEBAND DECIMATING FILTER" is a bonafide work carried out by

> Arathi M 1SG18EC009 Hamsitha B 1SG18EC035 Likhitha G 1SG18EC053 Monisha R 1SG18EC059

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. It is certified that all the suggestions indicated during interna sment have been incorporated in the report and this report satisfies the academic requirement in respect of project work prescribed for the degree.

Prof. Preethi T S

Guide

External Viva:

Dr. H C Sateesh Kumar

Head of the Department

Head of the Department

Dr. H Ramakrishna Principal

Bangalore-560 057

Principal Electronics & Communication Chikkasandra, Hesaraghatia Road, pthagiri College of Engineering

Sapthagiri College of Engineering

Name of the examiners

1. Do Poakash Jacker

Bangaloghaffe with date

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Intelligent Packaging System for **E-commerce** is a bonafide work carried out by

1SG18EC065
1SG17EC117
1SG18EC067
1SG18EC107

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. It is certified that all the suggestions indicated internal assessment have been incorporated in the les the academic requirement in respect of project report and this rep work prescribed for the degree.

Prof. Shobha Hugar

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Assistant Professor

Head of the Department Head of the Department

Principal Principal

Electronics & Communica Santhagiri College of Engineering Sapthagiri College of Engineer Mikkasandra, Hesaraghatta Road

External Viva

Bangalor 560

Bangalore-560 057

Name of the examiners

1 Do. Prakash Toolhov

lf 12/8/22

2. Dr. Sudlia M.

Sapthagirl College of Engineering 14/5, Chikkasandra, Hasaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Design and Performance Analysis of NoC for Streaming Aplication is a bonafide work carried out by

Jayanth K Holalkeri 1SG18EC041 Manasa Dev G I 1SG18EC055 Manoj Mahadev Biradar 1SG18EC056 Nagesh R Shanbhag 1SG18EC060

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof.Preethi T S

Guide

External Viva

Name of the examiners

Dr. H C Sateesh Kumar

ear of the the largar the inch

Biectronics & Communication Principal Principa Sapthagiri College of Engineer Hokkasandra, Hesaraghatta Road, Bangalore-560 057

Signature with date

Brincipal

Dr. H Ramakrishna

Sapthagiri College of Engineering 14/5, Chilkkasandra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

NAAC Accredited with 'A' Grade

Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Implementation of High Speed RNS Based FIR Filter is abonafide work carried out by

Poojitha S B 1SG18EC069 Shreya S 1SG18EC099 Ume e safa 1SG18EC109 Vaishnavi P B 1SG18EC110

in partial fulfillment for the award of degree of *Bachelor of Engineering in Electronics & Communication Engineering* of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Sung v Shity

Prof. Suma V Shetty

Guide

Dr. H C Sateesh Kumar

Head of the Department

Dr. H Ramakrishna

Principal Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

External Viva

Name of the examiners

1 p Agalga

Signature with date

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

NAAC Accredited with 'A' Grade

Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled **Android Controlled Wildlife Observation Robot** is a bonafide work carried out by

Nikhil M Kumar 1SG18EC061 Shashank S 1SG18EC094 Rakshith D 1SG19EC414

in partial fulfillment for the award of degree of *Bachelor of Engineering in Electronics & Communication Engineering* of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Prathibha.P.

Assistant Professor Head of the Department

Dr. H Ramakrishna

Principal

External Viva

Name of the examiners

1 P Agalya

2. S. SIGNAHA

Signature with date

H C Sateesh Kumar

8 11

828/9/22

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

NAAC Accredited with 'A' Grade

Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled **Virtual Doctor Robot** is a bonafide work carried out by

Deepak N	1SG19EC405
Imdad Hussain	1SG19EC409
Naveen H R	1SG19EC412
Yashwanth Kumar M	1SG19EC418

in partial fulfillment for the award of degree of *Bachelor of Engineering in Electronics & Communication Engineering* of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Madhu H M
Assistant Professor

Dr. H C Sateesh Kumar

Head of the Department

Dr. H Kamakrishna

Principal
Sapthagiri Conege of Engines ng
Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

External Viva

Name of the examiners

1 P-Agalga

2. S. SHORLA

Signature with date

Principal
Sapthagirl College of Engineering
14/5, Chikkasendra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled IoT Based Automated Hydroponic System is a bonafide work carried out by

Meda.Abhiram Sai	1SG18EC057
Suma G	1SG18EC103
Vidya KN	1SG18EC115
Yogeesh YR	1SG18EC122

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Agalya P

Guide

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Head of the Department Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road. Sapthagiri College of Engineering

Bangalor 560 057

Bangalore-560 057

External Viva

Name of the examiners

1 P. Agaly

2. C. SHO BHA

Signature with date

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Matn Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057 Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "IOT Based Gas Leakage Detection and Automatic Gas Cylinder Booking System" is a bonafide work carried out by

Amulya N D 1SG19EC400 Bindushree M G 1SG19EC402 Chaithanya D R 1SG19EC403 Divya R 1SG19EC406

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Sumar V Shipy Prof. Suma V Shetty

Guide

Dr. H.C. Sateesh Kumar

Hendarthe Department Electronics & Communication

Sapthagiri College of Engineering

Signature with date 057

Dr. H Ramakrishna

Principal Principal
Sapthagiri College of Engineeting

Chikkasandra, Hesaraghatta Road, Bangalore-560 057

External Viva Name of the examiners

f · Agalya

Principal Sapthagiri College of Engineering 14/5, Chikkasandra, Hasaraghatta Main Road

Sri Srinivasa Educational and Charitable Trust®

Sapthagiri College of Engineering,

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Automatic Solar Powered Pesticide Sprayer and Grass Cutter Incorporated with Alphabet Printing is a bonafide work carried out by

Sujan S	1SG18EC102
Swagat Shreyash	1SG18EC104
Vinay P	1SG18EC118
Vinay Prasad M	13G18EC119

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. J R Girish

Dr. H C Sateesh Kumar

Dr. H. Ramakrishna Principal

Assistant professor

Head of the Departmentnent Sectronics & Communication

Principal Sapthagiri College of Engineering hikkasandra, Hesaraghatta Road

Başiganture sed lodate

Bangalore-560 057

External Viva

Name of the examiners

2. S. SHOBHA

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Design and Implementation of Reconfigurable Neural Network is a bonafide work carried out by

Reshma S Hegde	1SG18EC083
Sakshi Pai B	1SG18EC086
Shiva Kumar S	1SG18EC097

Varun L 1SG18EC113

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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

Dr. H C Sateesh Kumar

Guide

Head of the Department Head of the Department

Principal Principal

Dr. H Ramakrishna

Electronics & Communication of Engineering Sapthagiri College of Engineeringhikkasandra, Hesaraghatta Road

External Viva

Bangalore-560 057

Name of the examiners

2. S SHOBUTA

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Network Intrusion and Cyber Attack Rates Detection using Machine Learning is a bonafide work carried out by,

Bharath K	1SG18EC014
Chetan B A	1SG18EC021
Darshan J	1SG18EC022
Iashwanth V	1SG18EC040

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Shobha S

Guide

Electronica & Communication

Had Satetick Bepartment

Principal

Sapthagiri College of Engineering Principal

Bangalor 560 057. Sapthagiri College of Engineering gnature with date Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

Dr. H Ramakrishna

External Viva

2. S. SHOBUA

Name of the examiners

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Metal Detector Robotic Vehicle is a bonafide work carried out by

Ashwini B N	1SG18EC013
Bhargavi T C	1SG18EC016
Chandana C B	1SG18EC019

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Assistant Professor

Head of the Department Electronics & Communication

Sapthagiri Gollegeapi Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057

Sapthagiri College of Engineering

Bangalor 560 057.

External Viva

Name of the examiners

1 Dr. Prakagh Trollow

Signature with date

2 Dr. Sudla, MS

Principal Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

NAAC Accredited with 'A' Grade

Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "Smart Medical Mirror" is a bonafide work carried out by

Ananya N Yadav 1SG18EC006 Archana H K 1SG18EC011 Geetha N P 1SG18EC033

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Ravi Shankara M N

Marken

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Associate Professor

Head of the Department Head of the Department

Principal Principal

Electronics & Communica Sapthagiri College of Engineering Sapthagiri College of Engineering Bangalore 560 057

Bangalore 560 057

Name of the examiners

External Viva

Bangalor 560 057.

1 Dr. Prakash Joolha

29/7/

2. Dr. Sudlipi. M.S

29/1/2

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



IFICATE

work entitled "IoT and sensor based water This is to certify that the segregation system" is a work carried out by

1SG18EC070 Prajwal | Badiger 1SG18EC073 Pramodh N 1SG18EC082 Rakshitha S Acharya 1SG18EC085 Saikrishna M

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Ravi Shankara M N

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Associate Professor

HHeadoff the Department Sapthagiri College of Engineering Electronics & Communication Chikkasandra, Hesaraghatta Road,
Bangalore-560 057. Bangalore 560 057.

Bangalore-560 057

External Viva

Name of the examiners

Signature with date

1. Dr. Bakash Jeann.
2. Dr. Sudlier. M.S. Suly

1. Dr. Bakash Troller

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bangaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "IoT Based Smart Shopping Trolley" is a bonafide work carried out by

1SG18EC078 Premsagar BL 1SG18EC087 Samarth K 1SG18EC100 Shreyas S 1SG18EC106 Theias S

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Shilpa V

Assistant Professor

PHHA Sáicht Romartment Dr. H Ramakashna

MESTUTING Department in the property of Engineering application of Engineering Bangalon 560 057 Chikkasandra, Hesaraghatta Road.

Bangalore-560 057

External Viva

Name of the examiners 1. Dr. Prakash Joolhan

2. Dr. Sudlia. M.S

Signature with date

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Matn Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "Smart advertising system in modern public transport" is a bonafide work carried out by

Asha K R 1SG19EC401 Meghana 1SG19EC411 Thanuja L 1SG19EC417

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Commun agineering of Visvesvaraya Technological

University, Belaga, i all 2021-22. It is certified that all the suggestions indicated during internament have been incorporated in the report and this report satisfies the academic requirement in respect of project work prescribed for the degree.

Dr. H.C Sateesh Kumar

Guide

Head of the Department

External Viva

Name of the examiners apthagiri College of Engineering

1 Dr. Pockash Joshov

2. Dr. Sudlia. H.S

Dr. H Ramakrishna Principal

Sapthagiffr@owege of Engineering Electronics & Communication Chikkasandra, Hosaraghatta Road,

Bangafore-560 057

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled "Solar Powered Wheelchair with Bluetooth Controller and IOT Cloud System for Physically Challenged Persons" is a bonafide work carried out by

Doreswamy V B	1SG19EC407
Manu K M	1SG19EC410
Prathap B R	1SG19EC413
Ranganath M	1SG19EC415

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Manasa M G

Dr. H C Sateesh Kumar

Guide

Head of the Department, Head of the Department **Electronics & Communication**

Sapthagiri College of Engineering Signangalar प्राह्म 60 057

External Viva

Name of the examiners 1 Dr. Prakash Jadha

Badhas 29/2/22 Dr. Sudlia. M.S

Dr. H Ramakrishna

Principal incipal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road.

Bangalore-560 057

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Virtual Doctor Robot is a bonafide work carried out by

Praveen N 1SG18EC076 Darshan gowda S 1SG19EC404 Harshavardhana KV 1SG19EC408

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Shobha S

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Guide

Head dethe floe partinguit Electronics & Communication Sapthagiri College of Engineening

Principal

Name of the examiners Bangalor Bangalor Bangalor Second Jacob Jaco

Dr. Sudha.M.S

Principal Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 067

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Navigation Assistance for Blind and Visually Impaired is a bonafide work carried out by

ANURAG G

[1SG18EC400]

DEEPAK G KRISHNAN

[1SG18EC404]

PRATEEK R BILGI

[1SG17EC065]

RAKSHITHA G N

[1SG17EC070]

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological 21-22. It is certified that all the University, Belagavi during the year suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project

work | prescribed for the degree.

Prof. Padmavathi .C

Dr. H C Sateesh Kumar

Guide

Head of the Departmentent **Electronics & Communication**

External Viva

Name of the examiners

Sapthagiri College of Engineering

Bangalor 560 057. Signature with date

Dr. H Ramakrishna

Principal

Principal Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Matn Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Fire detection using Image processing is a bonafide work carried out by

> Ashutosh Tiwari 1SG16EC011 Ashutosh Yadav

1SG17EC014

Kishan R

1SG17EC045

Nandan N 1SG16EC058

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Manasa M G

Dr. H C Sateesh Kumar

Dr. H Ramakrishna

Principal

Guide

Head of the Department Head of the Department Electronics & Communication

Sapthagiri College of Engineering

Bangalor .560 057. --Signature with date

External Viva

Name of the examiners

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

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Solar Floor Cleaner is a bonafide work carried out by

RANBIR KUMAR SINGH [1SG16EC087]

NIHARIKA R H

[1SG17EC059]

SHUBHAM KUMAR

[1SG15EC103]

SPOORTHI M

[1SG16EC128]

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Prof. Veena N

Project Guide

Dr. H C Sateesh Kumar Head of the Department

ElecHead of the Department ation

Sapthagiri College of Engineering Bangalor, 560 057

External Viva

with

Name of the examiners

1 Dr. Pockash Jollar

2. Dr. Sudlia. M.S

date

Principal-

Dr. H Ramakrishna

Principal

Sapthagiri College of Engineering 14/5, Chikkasandra, Hessraghatta Matn Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled indoor plants recommendation system to improve the air quality is a bonafide work carried out by

Karthik S Arkasali

1SG18EC409

Punyashree G

1SG18EC412

Sunitha M U

1SG18EC414

Yeshwanth Rao B.N

1SG18EC417

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Kelavalti.S. Kalavathi S

Guide

of the Department applia H C Sateesh Kumar sering Head of the Department

Dr. H Ramakrishna

Principal

External Viva

Name of the examiners

1. Dr. Prahash Talker

Dr. Sudlia.M.S Saly

signature with Date

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE)

NAAC Accredited with 'A' Grade

Accredited by NBA

ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled **Smart Fuel Station** is a bonafide work carried out by

ASHA E	[1SG18EC402]

MANOJ R [1SG18EC411]

SANTHOSH G [1SG18EC413]

THEERTHAPRASAD T [1SG18EC415]

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during ar 2021-22. It is certified that all the suggestions indicated during intermanent have been incorporated in the report and this report satisfies the academic requirement in respect of project work prescribed for the degree.

head of Saredsh Kumarent Electronics & Communication Guide and Head of the Department Sapulayin College of Engineering

External Vivar 560 057

Dr. H Ramakrishna

Principal

Name of the examiners

1. Dr. Prakash Jacker

2. Dr Sudlia. M.S

Signature with date

rolla 30/1/12

Principal
Sapthagiri Coilege of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

(Affiliated to Visvesvaraya Technological University and Approved by AICTE) NAAC Accredited with 'A' Grade Accredited by NBA ISO 9001-2015 and 14001-2015 certified Institute

Bengaluru-560057

Department of Electronics & Communication Engineering



CERTIFICATE

This is to certify that the project work entitled Design and Implementation of Automated security for Industry/Campus is a bonafide work carried out by

VINAY R

[1SG17EC424]

in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2021-22. 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 prescribed for the degree.

Kalavalti.S.

Prof. Kalavathi S

Guide

External Viva

Name of the examiners

1. Dr. Prakash Jackon

2. Dr. Sudha. M.S

HDraH Of Sheethdownanent

Electronics & Communication Sapthagiri College of Engineering

Bangalor 560 057.

Signature with date

Principal

Dr. H Ramakrishna

Principal

Sapthagirl College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057