ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
REGULATIONS – 2017

PROGRAMME EDUCATIONAL OBJECTIVES:

PEO1: To enable graduates to pursue research, or have a successful career in academia or industries associated with Electronics and Communication Engineering, or as entrepreneurs.

PEO2: To provide students with strong foundational concepts and also advanced techniques and tools in order to enable them to build solutions or systems of varying complexity.

PEO3: To prepare students to critically analyze existing literature in an area of specialization and ethically develop innovative and research oriented methodologies to solve the problems identified.

PROGRAMME OUTCOMES:

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

SEMESTER VIII
ELECTIVE IV

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8072	Electro Magnetic Interference and Compatibility	PE	3	3	0	0	3
2.	EC8007	Low power SoC Design	PE	3	3	0	0	3
3.	EC8008	Photonic Networks	PE	3	3	0	0	3
4.	EC8009	Compressive Sensing	PE	3	3	0	0	3
5.	EC8093	Digital Image Processing	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

SEMESTER VIII
ELECTIVE V

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8010	Video Analytics	PE	3	3	0	0	3
2.	EC8011	DSP Architecture and Programming	PE	3	3	0	0	3
3.	EC8094	Satellite Communication	PE	3	3	0	0	3
4.	CS8086	Soft Computing	PE	3	3	0	0	3
5.	IT8006	Principles of Speech Processing	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

*Professional Electives are grouped according to elective number as was done previously.

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
2.	EC8611	Technical Seminar	EEC	2	0	0	2	1
3.	EC8811	Project Work	EEC	20	0	0	20	10

LIST OF EQUIPMENT FOR A BATCH OF 30 STUDENTS 3 STUDENTS PER EXPERIMENT:

S.NO	NAME OF THE EQUIPMENT	REQUIRED
1	Trainer kit for carrying out LED and PIN diode characteristics, Digital multi meter, optical power meter	2 Nos
2	Trainer kit for determining the mode characteristics, losses in optical fiber	2 Nos
3	Trainer kit for analyzing Analog and Digital link performance, 2 Mbps PRBS Data source, 10 MHz signal generator, 20 MHz Digital storage Oscilloscope	2 Nos
4	Kit for measuring Numerical aperture and Attenuation of fiber	2 Nos
5	Advanced Optical fiber trainer kit for PC to PC communication, BER Measurement, Pulse broadening.	2 Nos
6	MM/SM Glass and plastic fiber patch chords with ST/SC/E2000 connectors	2 sets
7	LEDs with ST / SC / E2000 receptacles – 650 / 850 nm	2 sets
8	PIN PDs with ST / SC / E2000 receptacles – 650 / 850 nm	2 sets
9	Digital Communications Teaching Bundle (LabVIEW/MATLAB/Equivalent software tools)	10 Users
10	Software Define Radio Transceiver Platform with antennas and accessories	2 Nos

EC8811	PROJECT WORK	L T P C
		0 0 20 10

OBJECTIVES:

- To develop the ability to solve a specific problem right from its identification and literature review till the successful solution of the same. To train the students in preparing project reports and to face reviews and viva voce examination.

The students in a group of 3 to 4 works on a topic approved by the head of the department under the guidance of a faculty member and prepares a comprehensive project report after completing the work to the satisfaction of the supervisor. The progress of the project is evaluated based on a minimum of three reviews. The review committee may be constituted by the Head of the Department. A project report is required at the end of the semester. The project work is evaluated based on oral presentation and the project report jointly by external and internal examiners constituted by the Head of the Department.

TOTAL: 300 PERIODS

OUTCOME:
- On Completion of the project work students will be in a position to take up any challenging practical problems and find solution by formulating proper methodology.

CS8392	OBJECT ORIENTED PROGRAMMING	L T P C
		3 0 0 3

OBJECTIVES:
- To understand Object Oriented Programming concepts and basic characteristics of Java
- To know the principles of packages, inheritance and interfaces
- To define exceptions and use I/O streams
- To develop a java application with threads and generics classes
- To design and build simple Graphical User Interfaces

UNIT I   INTRODUCTION TO OOP AND JAVA FUNDAMENTALS   10
Object Oriented Programming - Abstraction – objects and classes - Encapsulation- Inheritance - Polymorphism- OOP in Java – Characteristics of Java – The Java Environment **-** Java Source File -Structure – Compilation. Fundamental Programming Structures in Java – Defining classes in Java – constructors, methods -access specifiers - static members -Comments, Data Types, Variables, Operators, Control Flow, Arrays , Packages - JavaDoc comments.

UNIT II   INHERITANCE AND INTERFACES   9
Inheritance – Super classes- sub classes –Protected members – constructors in sub classes- the Object class – abstract classes and methods- final methods and classes – Interfaces – defining an interface, implementing interface, differences between classes and interfaces and extending interfaces - Object cloning -inner classes, Array Lists - Strings

UNIT III   EXCEPTION HANDLING AND I/O   9
Exceptions - exception hierarchy - throwing and catching exceptions - built in exceptions, creating own exception, Stack Trace Elements.
Input / Output Basics – Streams – Byte streams and Character streams – Reading and Writing Console – Reading and Writing Files

UNIT IV   MULTITHREADING AND GENERIC PROGRAMMING   8
Differences between multi-threading and multitasking, thread life cycle, creating threads, synchronizing threads, Inter thread communication, daemon threads, thread groups.
Generic Programming – Generic classes – generic methods – Bounded Types – Restrictions and Limitations.

UNIT V   EVENT DRIVEN PROGRAMMING   9
Graphics programming - Frame – Components - working with 2D shapes - Using color, fonts, and images - Basics of event handling - event handlers - adapter classes - actions - mouse events - AWT event hierarchy - Introduction to Swing – layout management - Swing Components – Text Fields , Text Areas – Buttons- Check Boxes – Radio Buttons – Lists- choices- Scrollbars – Windows –Menus – Dialog Boxes.

TOTAL: 45 PERIODS

OUTCOMES:
Upon completion of the course, students will be able to:
- Develop Java programs using OOP principles
- Develop Java programs with the concepts inheritance and interfaces
- Build Java applications using exceptions and I/O streams
- Develop Java applications with threads and generics classes
- Develop interactive Java programs using swings

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S.P.G.C.Nagar, K.Vellakulam - 625 701, (Near Virudhunagar), Madurai District.

EC8811 - Project Viva Voce Examinations - April 2021

Date & Session : 28.04.21 & 29.04.21 FN&AN

Project Title

Semester : 08

Sl. No.	Name of the Program and Branch	Batch Number	Roll No	University Register No	Name	Title of the Project	Name of the Guide
1	B.E (ECE)	EMB # 01	17UECE082	920417106110	VIKRAMAN K	LOW COST WIRELESS SCORE BOARD DISPLAY USING BLUTOOTH	Dr.R.SURESH BABU
			17UECE077	920417106052	KRISHNA PRASAD RAJA S		
			17UECE110	920417106098	SIVA SOORIYA S		
2		EMB # 02	17UECE071	920417106025	DHARSHANA M	HOME AUTOMATION USING NODEMCU	Mr.R.ASHOK
			17UECE002	920417106072	NIVETHA K		
			17UECE003	920417106067	NAGA SHALINI R		
3		EMB # 03	17UECE078	920417106035	HARSHANA A	SMART GAS LEVEL MONITORING, BOOKING AND GAS LEAKAGE DETECTOR	Dr.V.JEYALAKSHMI
			17UECE055	920417106010	AMUSALNI M		
			17UECE095	920417106037	HINDUJA K		
4		EMB # 04	17UECE026	920417106009	ALLWIN JEBARAJ S	SMART BIN FOR SMART CITY	Mr.S.ALWYN RAJIV
			17UECE054	920417106064	MUHAMMED ANVER AYAZ N		
			17UECE066	920417106059	MAREESWARAN K		
5		EMB # 05	17UECE092	920417106003	ABISHEGA D	DEPLOYMENT OF TINYML FOR ANOMALY DETECTION IN SELF DRIVING CARS	Mr.P.ARAVIND
			17UECE051	920417106112	VISHALINIMEGHA V		
			17UECE063	920417106031	GAYATHRI C		
6		EMB # 06	17UECE068	920417106100	SOUNDHARYA K	IOT BASED NON-INVASIVE TEMPERATURE AND FACE RECOGNITION SYSTEM FOR ATTENDANCE MONITORING	Mr.P.ARAVIND
			17UECE012	920417106101	SOUNTHARYA K		
			17UECE057	920417106097	SIVASANKARI R		

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29.04.21 FN&AN

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Semester : 08

Sl. No.	Name of the Program and Branch	Batch Number	Roll No	University Register No	Name	Title of the Project	Name of the Guide
7		EMB # 07	17UECE053	920417106047	KARTHIKEYAN K	PROTECTION OF CROPS FROM PESTS AND WILD ANIMALS USING MICROCONTROLLER BASED TOWER	Mrs.P.RAMALAKSHMI
			17UECE093	920417106088	SANJEEV S S		
			17UECE041	920417106020	DEEPAK ABISECK A		
8		EMB # 08	17UECE115	920417106056	LOGESH WARAN M	AUTOMATIC DETECTION AND CONVERSION OF HIGH BEAMLIGHT TO LOW BEAMLIGHT IN VEHICLE	Mrs.M.GOKILA
			17UECE009	920417106019	DAVID STEPHEN RAJ S		
			17UECE024	920417106043	JEYA PRAVEEN V		
			17UECE032	920417106028	DINESH KUMAR V		
9	B.E (ECE)	EMB # 09	17UECE025	920417106068	NAVEEN S	LOW COST SANITARY NAPKIN VENDING MACHINE USING IoT AND SMOKE FREE DISPOSAL MACHINE	Dr.R.SURESH BABU
			17UECE034	920417106027	DINESH KUMAR K		
			17UECE096	920417106108	VENKATESH K K		
10		EMB # 10	17UECE085	920417106054	LOGASRI N	LABOUR PREVENTION FROM DANGEROUS GAS IN COAL MINES USING SMART HELMET	Mr.R.ASHOK
			17UECE116	920417106093	SHANGAVI P		
			17UECE008	920417106039	JEBA ESTHER G		
11		EMB # 11	17UECE081	920417106018	CHITRA DEVI G	IMPLEMENTATION OF ARDUINO BASED POWER THEFT DETECTION AND BILLING FOR SINGLE PHASE POWER SYSTEM	Mrs.S.NISHARANI
			17UECE088	920417106104	SUGA PRIYA K		
			17UECE100	920417106091	SARASWATHI M		
12		EMB # 12	17UECE006	920417106049	KEERTHANA T	INTELLIGENT CASHEW NUT SORTING MACHINE USING RASPBERRY PI 3	Mrs.T.PRATHIBA
			17UECE016	920417106016	BALAVIGNESHWARI G		
			17UECE019	920417106069	NIRANJANA SARATHA DEVI S		

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13		EMB # 13	17UECE028	920417106105	SUNDARAPRIYA S	WIRELESS SYSTEM TO MONITOR FOOD GRAIN STORAGE	Dr.C.GEETHA PRIYA
			17UECE039	920417106024	DHANYA SHRI B		
			17UECE049	920417106078	PRIYADHARSHINI P		
14		DIP # 01	17UECE010	920417106099	SORNA MANICKAM B	DEEP LEARNING FOR IMAGE BASED CASSAVA DISEASE DETECTION AND CLASSIFICAION	Dr.R.SURESH BABU
			17UECE040	920417106008	ALAGU MANI RATHINAM R A		
			17UECE045	920417106017	CHERUBINGIFTSON M		
15		DIP # 02	17UECE046	920417106032	GAYATHRI DEVI V R	GENDER CLASSIFICATION OF FACE IMAGES USING COMPUTER VISION ALGORITHM	Dr.A.GEETHA
			17UECE101	920417106026	DHEIVARANI L		
			17UECE013	920417106038	JASMINE BALA B		
16	B.E (ECE)	DIP # 03	17UECE105	920417106083	RAJESH MANI G	FINGER NAIL BASED DISEASE ANALYSIS USING IMAGE PROCESSING TECHNIQUES	Dr.A.GEETHA
			17UECE106	920417106085	RIYAZ KHAN A		
			17UECE058	920417106055	LOGESH KUMAR C		
17		DIP # 04	17UECE029	920417106106	SURENDRAN S	DEEP LEARNING METHOD FOR MRI BRAIN TUMOR SEGMENTATION AND DETECTION	Dr.T.PANDISELVI
			17UECE031	920417106007	AKSHAY TOM ABRAHAM		
			17UECE098	920417106004	AHAMED HAKEEM B		
18		DIP # 05	17UECE090	920417106076	POORNADEVI P	ASCERTAINMENT OF DIABETES BASED ON NON-INVASIVE METHOD OF IRIDOLOGY	Dr.T.PANDISELVI
			17UECE075	920417106029	GANGAASRI G		
			17UECE059	920417106063	MONISA S		

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19		DIP # 06	17UECE091	920417106102	SRI RAM M	REAL TIME ALERT SYSTEMTO DROWSY DRIVERS USING DEEP LEARNING APPROACH	Mrs.C.NAGAVANI
			17UECE089	920417106040	JEEVAA NARAYANAN M S		
			17UECE050	920417106087	SACHIN RAJ R		
20		DIP # 07	17UECE033	920417106061	MITHUN SANKAR S S	THIRD INTELLIGENT EYE FOR VISUALLY IMPAIRED PEOPLE	Mrs.C.NAGAVANI
			17UECE038	920417106082	RAJARAJAN A V R		
			17UECE097	920417106048	KARTHIKEYAN M		
21		DIP # 08	17UECE060	920417106023	DHANALAKSHMI M	AN EFFICIENT METHOD OF KEYFRAME EXTRACTION AND CLASSIFICATION FOR RETRIEVAL	Mrs.T.PRATHIBA
			17UECE074	920417106022	DEEPIKA P		
			17UECE103	920417106042	JEYACHITRA R		
22	B.E (ECE)	DIP # 09	17UECE086	920417106015	ATCHAYADHARANI A	FACE RECOGINTION USING VGG16 ARCHITECTURE	Mrs.T.PRATHIBA
			17UECE056	920417106103	SUBBULAKSHMI S		
			17UECE007	920417106012	ARUNA SRI S		
23		WC # 01	17UECE080	920417106077	POOVITHA T	WIRELESS AUDIO TRANSMSSION USING NI LABVIEW AND USRP	Dr.R.S.VENKATESAN
			17UECE099	920417106006	AKILA B		
			17UECE114	920417106079	PRIYADHARSHINI S		
24		WC # 02	17UECE021	920417106001	ABINAYA P	IMPROVING ENERGY EFFICIENCY BY OPTIMIZING TRANSMIT POWER AND BEAMFORMING VECTORS USING GREY WOLF ALGORITHM	Mrs.S.NISHARANI
			17UECE043	920417106041	JENIFER R		
			17UECE087	920417106080	PRIYADHARSHINI V		
			17UECE011	920417106034	HARIPRIYA J		

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Semester : 08

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25		WC # 03	17UECE070	920417106071	NITHARSHANA D	DESIGN OF MIMO ANTENNA FOR AUTOMOTIVE APPLICATIONS	Mr.M.RAMESH
			17UECE065	920417106011	APARNA V		
			17UECE062	920417106036	HEMALATHA G		
26		WC # 04	17UECE036	920417106090	SANTHOSAN V	A DUAL BAND DIPOLE ANTENNA FOR WI-FIAPPLICATION USING 4NEC2 SIMULATOR	Dr.C.GEETHA PRIYA
			17UECE052	920417106074	PONBALAGANESH B		
27		RF # 01	17UECE037	920417106066	MUTHU SUBRAMANIAM M	DESIGN AND ANALYSIS OF MICROSTRIP PATCH ANTENNA FOR 5G	Dr.C.GEETHA PRIYA
			17UECE108	920417106057	MAHESWARAN K		
28	B.E (ECE)	RF # 02	17UECE061	920417106060	MEERA DEVI V	DESIGN OF METAMATERIAL BASED MICROSTRIP PATCH ANTENNA FOR BRAIN TUMOR DETECTION	Dr.N.M.MARY SINDHUJA
			17UECE069	920417106030	GANGA DEVI M		
			17UECE005	920417106021	DEEPIKA K		
			17UECE118	920417106301	ANANTHI M		
29		RF # 03	17UECE107	920417106081	RAJADHARSHINI M	ANALYSIS OF ADULTERATION IN FOOD SAMPLES USING LIBS TECHNOLOGY	Mr.R.ASHOK
			17UECE112	920417106033	HARINI SRI M		
			17UECE102	920417106048	KEERTHIGA M		
30		RF # 04	17UECE004	920417106002	ABIRAMI B	DESIGN OF SIX BIT DMTL PHASE SHIFTER FOR Ka BAND APPLICATION	Dr.N.M.MARY SINDHUJA
			17UECE076	920417106051	KEERTHIGADEVI V		
			17UECE084	920417106095	SIVAMATHY S		

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Sl. No.	Name of the Program and Branch	Batch Number	Roll No	University Register No	Name	Title of the Project	Name of the Guide
31		VLSI #01	17UECE017	920417106073	PRABHU RAJA G	ANALYSIS OF LOW POWER CONSUMPTION IN SUBTRACTOR AND DIVIDER CIRCUITS USING TANNER BY GDI (GATE DIFFUSION INPUT) TECHNIQUE	Dr.R.S.VENKATESAN
			17UECE064	920417106053	LAKSHMI NARAYANAN K		
			17UECE067	920417106109	VENKATESH R K		
32	B.E (ECE)	VLSI #02	17UECE072	920417106075	POOJASREE T D P	THE ELECTRONIC PIANO DESIGN USING VERILOG BASED ON FPGA	Mrs.P.MUHTUMARI
			17UECE001	920417106113	YAZHINI S		
			17UECE044	920417106084	RAKSHANA C		
33		VLSI #03	17UECE018	920417106046	KARNIKA S M	FPGA IMPLEMENTATION OF UART TRANSMISSION AND RECEPTION USING CRYPTO SYSTEMS PROJECT REPORT	Mr.S.ALWYN RAJIV
			17UECE020	920417106094	SHIVANI V M		
			17UECE048	920417106107	THANGARANI M		
34		VLSI & NET #04	17UECE083	920417106092	SHAFREEN FARHATH M	ENHANCED SECURITY BY RECONFIGURABLE PASSWORD SETTING IN PERSONAL AREA NETWORK	Mrs.A.J.BHUVANESHWARI
			17UECE079	920417106086	ROOPA DHARSHINI P		
			17UECE027	920417106045	KARISHMA KRISHNAN R		

Internal Examiner
Dr.R.Suresh Babu
Prof. & Head / ECE, KCET

DEEP LEARNING FOR IMAGE BASED CASSAVA DISEASE DETECTION AND CLASSIFICAION

PROJECT REPORT

Submitted by

ALAGU MANI RATHINAM.R.A (920417106008)

CHERUBIN GIFTSON.M (920417106017)

SORNA MANICKAM.B (920417106099)

In practical fulfillment for the award of the degree of

BACHELOR OF ENGINEERING
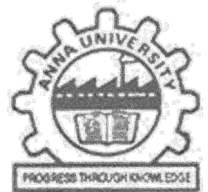
IN

ELECTRONICS AND COMMUNUCATION ENGINEERING

DEPARTMENT OF ELECTRONICS AND

COMMUNUCATION ENGINEERING

KAMARAJ COLEGE OF ENGINEERING AND TECHNOLOGY

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K.VELLAKULAM – 625 701(Near Virudhunagar)

APRIL 2021

KAMARAJ COLEGE OF ENGINEERING AND TECHNOLOGY

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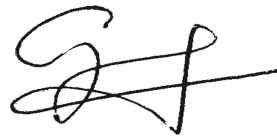**K.VELLAKULAM – 625 701(Near Virudhunagar)**

BONAFIDE CERTIFICATE

Certificate that the project report "deep learning for image based cassava disease detection and classification " is the bonafide EC8811 – Project Work of " **ALAGU MANI RATHINAM.R.A (920417106008), CHERUBIN GIFTSON.M (920417106017)** & **SORNA MANICKAM.B (920417106099)** " who carried out the project work under my supervision.

SIGNATURE

DR.R.SURESHBABU,

Professor and Head of the Department,

Department of Electronics and
Communication Engineering,

Kamaraj college of Engineering &
Technology, K.Vellakulam, Madurai.

SIGNATURE

DR.R.SURESHBABU,

Professor and Head of the Department,

Department of Electronics and
Communication Engineering,

Kamaraj college of Engineering &

Technology, K.Vellakulam, Madurai.

Internal Examiner

External Examiner

GENDER CLASSIFICATION OF FACE IMAGES USING COMPUTER VISION ALGORITHM

PROJECT REPORT

Submitted by

L.Dheivarani (920417106026)

V.R.Gayathri Devi (920417106032)

B.Jasmine Bala (920417106038)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT OF ELECTRONICS AND

COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K. VELLAKULAM-625 701 (Near Virudhunagar)

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

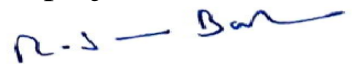**K. VELLAKULAM-625 701 (Near Virudhunagar)**

BONAFIDE CERTIFICATE

Certified that this project report entitled "**GENDER CLASSIFICATION OF FACE IMAGES USING COMPUTER VISION ALGORITHM**" is the bonafide record of EC8811-Project work done by "**L. DHEIVARANI (920417106026), V.R.GAYATHRI DEVI (920417106032), B.JASMINE BALA (920417106038)**" of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project work under my supervision.

SIGNATURE

Dr.R.Suresh Babu,

PROFESSOR AND

HEAD OF THE DEPARTMENT

Department of Electronics and

Communication Engineering,

Kamaraj College of Engg &Tech,

 K.Vellakulam, Madurai.

SIGNATURE

 Dr.A.GEETHA

 SUPERVISOR AND

 ASSOCIATE PROFESSOR

 Department of Electronics and

 Communication Engineering,

 Kamaraj College of Engg & Tech,

 K.Vellakulam, Madurai

INTERNAL EXAMINER

 EXTERNAL EXAMINER

FINGERNAIL BASED DISEASE ANALYSIS USING IMAGE PROCESSING TECHNIQUES

A PROJECT REPORT

Submitted by

LOGESH KUMAR C (920417106055)
RAJESH MANI G (920417106083)
RIYAZ KHAN A (920417106085)

In partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)
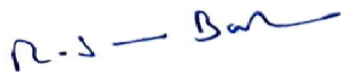
K.VELLAKULAM – 625 701 (Near Virudhunagar)

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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BONAFIDE CERTIFICATE

Certified that this project report "**FINGERNAIL BASED DISEASE ANALYSIS USING IMAGE PROCESSING TECHNIQUES**" is the bonafide record of EC8811- project work done by "**LOGESH KUMAR C (REG NO:920417106055), RAJESH MANI G (REG NO:920417106083), RIYAZ KHAN A (REG NO:920417106085)**" of final year Electronics and Communication Engineering during the academic year 2019-2020, who carried out the project work under my supervision.

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Near Virudhunagar-625 701.

Place: K.Vellakulam,
      Near Virudhunagar.

Date: 28-04-2021

INTERNAL EXAMINER

EXTERNAL EXAMINER

DEEP LEARNING METHOD FOR MRI BRAIN TUMOR

SEGMENTATION AND DETECTION

A PROJECT REPORT

Submitted by

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AHAMED HAKEEM.B (920417106004)

AKSHAY TOM ABRAHAM (920417106007)

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MAY 2021

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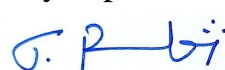**K. VELLAKULAM – 625701 (Near Virudhunagar)**

BONAFIDE CERTIFICATE

Certified that this project report **"DEEP LEARNING METHOD FOR MRI BRAIN TUMOR SEGMENTATION AND DETECTION"** is the bonafide work of EC8811-Project work done by **"SURENDRAN S (920417106106), AHAMED HAKEEM B (920417106004) and AKSHAY TOM ABRAHAM (920417106007)"** of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project under my supervision.

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Madurai - 625 701	Madurai - 625 701

Submitted for Anna University Project Viva-Voce examination held on 28-04-2021 _____.

INTERNAL EXAMINER	**EXTERNAL EXAMINER**

ASCERTAINMENT OF DIABETES BASED ON NON-INVASIVE METHOD OF IRIDOLOGY

A PROJECT REPORT

Submitted by

GANGAASRI.G   (920417106029)

MONISA.S   (920417106063)

POORNA DEVI.P (920417106076)

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BONAFIDE CERTIFICATE

Certified that this project report **"ASCERTAINMENT OF DIABETES BASED ON NON-INVASIVE METHOD OF IRIDOLOGY** "is the bonafide work of **GANGAASRI G** (920417106029), **MONISA.S** (920417106063) and **POORNA DEVI P** (920417106076) of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project under my supervision.

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Submitted for Anna University Project Viva-Voce examination held on

___28-04-2021_____.

INTERNAL EXAMINER   **EXTERNAL EXAMINER**

REAL TIME ALERT SYSTEM TO DROWSY DRIVERS USING DEEP LEARNING APPROACH

A PROJECT REPORT

Submitted by

M.S.JEEVAA NARAYANAN(REG NO:920417106040)

R.SACHIN RAJ (REG NO:920417106087)

M.SRIRAM (REG NO:920417106102)

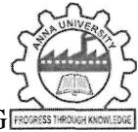In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

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KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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BONAFIDECERTIFICATE

Certified that this project report entitled"**REAL TIME ALERT SYSTEM TO DROWSY DRIVERS USING DEEP LEARNING APPROACH"**isthebonafiderecordofEC8811-projectworkdoneby"**M.S.JEEVAA NARAYANAN(REG NO: 920417106040),M.SRI RAM(REGNO: 920417106102), R.SACHIN RAJ(REGNO: 920417106087**)"of final year Electronics and Communication Engineering during the academic year2020-2021,who carried out the project work under my supervision.

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INTERNAL EXAMINER   **EXTERNALEXAMINER**

THIRD INTELLIGENT EYE FOR VISUALLY IMPAIRED PEOPLE

PROJECT REPORT
Submitted by

MITHUNSHANKAR.S. S
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In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING
IN
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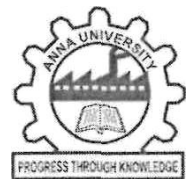
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BONAFIDE CERTIFICATE

Certified that this project report "**THIRD INTELLIGENT EYE FOR VISUALLY IMPAIRED PEOPLE**" is the bonafide work of EC8811 - Project Work done by **MITHUNSHANKAR.S.S (920417106061), RAJA RAJAN.A.V.R (92041710682) and KARTHIKEYAN.M (920417106048)** who carried out the project under my supervision.

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INTERNAL EXAMINER   **EXTERNAL EXAMINER**

AN EFFICIENT METHOD OF KEYFRAME EXTRACTION AND CLASSIFICATION FOR RETRIEVAL

A PROJECT REPORT

Submitted by

M.DHANALAKSHMI(920417106023)

P.DEEPIKA(920417106022)

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In partial fulfilment for the award of the degree of

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April 2021

BONAFIDE CERTIFICATE

Certified that this project report entitled **"AN EFFICIENT METHOD OF KEYFRAME EXTRACTION AND CLASSIFICATION FOR RETRIEVAL"** is the bonafide record of EC8811-Project Work done by **"DEEPIKA.P (920417106022), DHANALAKSHMI.M (920417106023) and JEYACHITRA.R (920417106042)"** of final year Electronics and Communication Engineering during the academic year 2020 – 2021, who carried out the project under my supervision**.**

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Submitted for the Anna University Project Viva-Voce examination held at Kamaraj College of Engineering and Technology on 29.04.2021.

INTERNAL EXAMINER

EXTERNAL EXAMINER

FACE RECOGINTION USING

VGG16 ARCHITECTURE

A PROJECT REPORT

Submitted by

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S. SUBBULAKSHMI (920417106103)

A. ATCHAYADHARANI (920417106015)

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April 2021

BONAFIDE CERTIFICATE

Certified that this project report entitled **"FACE RECOGNITION USING VGG16 ARCHITECTURE"** is the bonafide record of EC8811-Project Work done by **"ARUNA SRI.S (920417106012), ATCHAYADHARANI.A (920417106015) and SUBBULAKSHMI.S (920417106103)"** of final year Electronics and Communication Engineering during the academic year 2020 – 2021, who carried out the project under my supervision**.**

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Submitted for the Anna University Project Viva-Voce examination held at Kamaraj College of Engineering and Technology on 29.04.2021.

INTERNAL EXAMINER

EXTERNAL EXAMINER

LOW COST WIRELESS SCOREBOARD
DISPLAY USING BLUTOOTH

A PROJECT REPORT

Submitted by

K.VIKRAMAN
S.KRISHNA PRASTH RAJA
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In partial fulfilment for the award of the degree
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ANNA UNIVERSITY : CHENNAI 600 025

April 2021

ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"LOW COST WIRELESS SCOREDISPLAY USING BLUETOOTH"** is the bonafide work of EC8811 - Project Work done by **K.VIKRAMAN (920417106110), S.KRISHNAPRASATH RAJA (920417106052) and S.SIVA SOORIYA (920417106098)** who carried out the project under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

HOME AUTOMATION USING NODEMCU

A PROJECT REPORT

Submitted by

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M. DHARSHANA (920417106025)

R. NAGASHALINI (920417106069)

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APRIL 2021

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Certified that this project report **"HOME AUTOMATION USING NodeMCU"** is the bonafide record of EC8811-project work done by work of **"K.Nivetha(Reg. No:920417106072) ,M.Dharshana (Reg. No: 920417106025) and R.Nagashalini (Reg. No: 920417106067)"** of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project under my supervision.

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Submitted for Anna University Project Viva-Voce examination held on
28-04-2021
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INTERNAL EXAMINER

EXTERNAL EXAMINER

SMART GAS LEVEL MONITORING, BOOKING

AND GAS LEAKAGE DETECTOR

A PROJECT REPORT

Submitted by

AMUSALNI.M (920417106010)

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HINDUJA.K (920417106037)

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APRIL 2021

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BONAFIDE CERTIFICATE

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INTERNAL EXAMINER   **EXTERNAL EXAMINER**

SMART BIN FOR SMART CITY

PROJECT REPORT

Submitted by

ALLWINJEBARAJ.S   **(920417106009)**

MAREESWARAN.K   **(920417106059)**

MUHAMMED ANVER AYAZ.N   **(920417106064)**

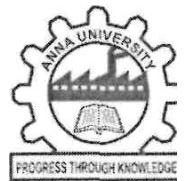*In partial fulfilment for the award of the degree of*

BACHELOR OF ENGINEERING

IN

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APRIL 2021

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Certified that this project report " **SMART BIN FOR SMART CITY** " is the bonafide work of EC8811 - Project Work done by **ALLWINJEBERAJ.S (REG NO.: 920417106009), MAREESWARAN.K (REG NO.: 920417106059)** and **MUHAMMED ANVER AYAZ.N (REG NO.: 920417106064)** of final year Electronics and Communication Engineering during the academic year 2020-2021 who carried out the project under my supervision.

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INTERNALEXAMINER   **EXTERNALEXAMINER**

DEPLOYMENT OF TINYML FOR ANOMALY DETECTION IN SELF DRIVING CARS

A PROJECT REPORT

Submitted by

D.ABISHEGA

C.GAYATHRI

V.VISHALINIMEGHA

in partial fulfillment for the award of the degree of

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APRIL 2021

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Certified that this project report **"DEPLOYMENT OF TINYML FOR ANOMALY DETECTION IN SELF DRIVING CARS"** is the bonafide work of EC8811 - Project Work done by "**ABISHEGA D (REG. NO: 920417106003), GAYATHRI C(REG. NO: 920417106031) and VISHALINI MEGHA V (REG. NO: 920417106112**)" of final year Electronics and Communication Engineering during the academic year 2020-2021 who carried out the project under mysupervision.

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INTERNALEXAMINER

EXTERNALEXAMINER

IOT BASED NON-INVASIVE TEMPERATURE AND FACE RECOGNITION SYSTEM FOR ATTENDANCE MONITORING

A PROJECT REPORT

Submitted by

SOUNDHARYA K (92041706100)
SIVASANKARI R (92041706097)
SOUNTHARYA K (92041706101)

In

Partial fulfillment for the award of the degree

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APRIL 2021

BONAFIDE CERTIFICATE

Certified that this project report entitled **"IOT BASED NON-INVASIVE TEMPERATURE AND FACE RECOGNITION SYSTEM FOR ATTENDANCE MONITORING"** is the bonafide record of EC8811 - Project work done by "**SOUNDHARYA.K (REG NO: 920417106100), SIVASANKARI.R (REG NO: 920416106097) and SOUNTHARYA.K (REG NO: 920416106101)**" of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project under my supervision.

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Submitted for the Anna University Project Viva-Voce examination heldat Kamaraj College of Engineering and Technology on ……………… 28-04-2021

INTERNAL EXAMINER

EXTERNAL EXAMINER

PROTECTION OF CROPS FROM PESTS AND WILD ANIMALS USING MICROCONTROLLER BASED TOWER

A PROJECT REPORT

Submitted by

A DEEPAK ABISECK   **(Reg No: 920417106020)**

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APRIL 2021

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K.VELLAKULAM - 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report **"PROTECTION OF CROPS FROM PESTS AND WILD ANIMALS USING MICROCONTROLLER BASED TOWER"** is the bonafide record of EC8811-Project work done by **A.DEEPAK ABISECK (REG NO.: 920417106020), K.KARTHIKEYAN (REG NO.: 920417106047) and S.S.SANJEEV (REG NO.: 920417106088)** of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project under my supervision.

SIGNATURE
Dr.R.SURESH BABU,M.E,Ph.D,

HEAD OF THE DEPARTMENT

Professor,

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SIGNATURE
P.RAMALAKSHMI,M.E, (Ph. D)

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Assistant Professor,

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Kamaraj College of Engineering
& Technology

Virudhunagar-625 701

Submitted for viva voce held on __28-04-2021__

INTERNAL EXAMINAR

EXTERNAL EXAMINAR

AUTOMATIC DETECTION AND CONVERSION OF HIGH BEAM LIGHT TO LOW BEAM LIGHT IN VEHICLE

A PROJECT REPORT

Submitted by

M.LOGESHWARAN

V.DINESHKUMAR

V.JEYAPRAVEEN

S.DAVID STEPHEN RAJ

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affliated to Anna University,Chennai)

K.VELLAKULAM, MADURAI DISTRICT

April 2021

BONAFIDE CERTIFICATE

Certified that this project report **"AUTOMATIC DETECTION AND CONVERSION OF HIGH BEAM LIGHT TO LOW BEAM LIGHT IN VEHICLE"** is the bonafide work of EC8811 – project work done by **"LOGESHWARAN M (920417106056), DINESH KUMAR V (920417106028),JEYA PRAVEEN (920417106043),DAVID STEPHEN RAJ S (920417106019)"** who carried out the project work under my supervision.

SIGNATURE

SIGNATURE

Dr.R.Suresh Babu, M.E.,M.B.A.,Ph.D.,

HEAD OF THE DEPARTMENT

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Mrs.M.GOKILA, M.E.,

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Virudhunagar, Madurai District

INTERNAL EXAMINER

EXTERNAL EXAMINER

LOW COST SANITARY NAPKIN VENDING MACHINE
USING IoT AND SMOKE FREE DISPOSAL MACHINE

A PROJECT REPORT

Submitted by

NAVEEN.S (920417106068)

DINESH KUMAR.K (920417106027)

VENKATESH.K.K (920417106108)

In partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

In

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K.VELLAKULAM - 625 701 (Near Virudhunagar)

APRIL 2021

KAMARAJ COLLEGE OF ENGGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.VELLAKULAM - 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report entitled **"LOW COST SANITARY NAPKIN VENDING MACHINE USING IoT AND SMOKE FREE DISPOSAL MACHINE"** is the bonafide record of EC8811-Project work by done by **NAVEEN.S (REG NO.: 920417106068), DINESH KUMAR.K (REG NO.: 920417106027) and VENKATESH.K.K(REG NO.: 920417106108)**of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project under my supervision.

SIGNATURE	**SIGNATURE**
Dr.R.SURESH BABU,	**Dr.R.SURESH BABU,**
PROFESSOR AND	**SUPERVISOR,**
HEAD OF THE DEPARTMENT	**PROFESSOR AND**
	HEAD OF THE DEPARTMENT
Dept. of ECE	Dept. of ECE
Kamaraj College of Engineering& Technology	Kamaraj College of Engineering& Technology
K.Vellakulam	K.Vellakulam - 625 701
Madurai	Madurai

INTERNAL EXAMINER   **EXTERNAL   EXAMINER**

LABOUR PREVENTION FROM DANGEROUS GAS IN COAL MINES USING SMART HELMET

A PROJECT REPORT

Submitted by

JEBA ESTHER G(920417106039)

LOGASRI N   (920417106054)

SHANGAVI P   (920417106091)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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K.VELLAKULAM – 625 701 (Near Virudhunagar)

MADURAI DISTRICT

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.VELLAKULAM – 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report entitled **"LABOUR PREVENTION FROM DANGEROUS GAS IN COAL MINES USING SMART HELMET"** is the bonafide work of EC8811- project report done by **"G.JEBA ESTHER (920417106039), N.LOGASRI (920417106054), P.SHANGAVI (920417106091)"** of final year Electronics and Communication Engineering during the academic year 2020-2021,who carried out the project work under my supervision.

SIGNATURE   **SIGNATURE**

Dr. R. SURESH BABU,   **Mr. R. ASHOK,**

HEAD OF THE DEPARTMENT,   **SUPERVISOR,**

Professor,   Assistant Professor,

Department of Electronics and   Department of Electronics and

Communication Engineering,   Communication Engineerig,

Kamaraj College of Engg & Tech,   Kamaraj College of Engg &Tech,

K.Vellakulam, Madurai.   K.Vel1aku1am, Madurai.

INTERNAL EXAMINER   **EXTERNAL EXAMINER**

IMPLEMENTATION OF ARDUINO BASED POWER THEFT DETECTION AND BILLING FOR SINGLE PHASE POWER SYSTEM

PROJECT REPORT
Submitted by

CHITRA DEVI G [920417106018]
SARASWATHI M [920417106091]
SUGA PRIYA K [920417106104]

In partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING
In
ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT OF ECE
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
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Anna University, Chennai)

K.VELLAKULAM – 625 701(Near Virudhunagar)

APRIL 2021

KAMARJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.VELLAKULAM-625 701(Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report entitled **"IMPLEMENTATION OF ARDUINO BASED POWER THEFT DETECTION AND BILLING FOR SINGLE PHASE POWER SYSTEM "** is the bonafide record of EC8811-Project work done by **"CHITRA DEVI G (REG NO.: 920417106018), SARASWATHI M (REG NO.: 920417106091) and SUGA PRIYA K (REG NO.: 920417106104)"** of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project under my supervision.

SIGNATURE	**SIGNATURE**
Dr.R.SURESH BABU,	**Mrs.S.NISHARANI,**
PROFESSOR AND	**SUPERVISOR,**
HEAD OF THE DEPARTMENT	**ASSISTANT PROFESSOR**
Dept. of ECE	Dept. of ECE
Kamaraj College of Engineering& Technology	Kamaraj College of Engineering& Technology
K.Vellakulam	K.Vellakulam
Madurai District - 625 701	Madurai District- 625 701

Submitted for Anna University Project Viva-Voce examination held on 28-04-2021.
_____.

INTERNAL EXAMINER   **EXTERNAL   EXAMINER**

INTELLIGENT CASHEW NUT SORTING MACHINE USING RASPBERRY PI 3

A PROJECT REPORT

Submitted by

S.NIRANJANA SARADHA DEVI

T.KEERTHANA

G.BALAVIGNESHWARI

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)
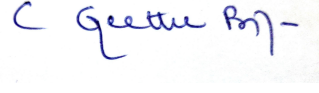
K.VELLAKULAM, 625 701(Near Virudhunagar)

APRIL 2021

BONAFIDE CERTIFICATE

Certified that this project report entitled "**INTELLIGENT CASHEW NUT SORTING MACHINE USING RASPBERRY PI 3**" is the bonafide work of EC6811-Project work done by   "**S.NIRANJANA SARADHA DEVI (Reg.No: 920417106069), T.KEERTHANA (Reg.No:9204171049), G.BALA VIGNESHWARI (Reg.No.920417106016)"** of final year Electronics and Communication Engineering during the academic year 2020 – 2021, who carried out the project under my supervision.

SIGNATURE

Dr.R.SURESH BABU, M.E.,M.B.A.,Ph.D.,

HEAD OFTHEDEPARTMENT

Professor,

Department ofElectronicsand

CommunicationEngineering,

Kamaraj College of Engineering and

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Madurai District.

SIGNATURE

Mrs.T.PRATHIBA,M.E.,(Ph.D).,

SUPERVISOR

Assistant Professor,

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Kamaraj College of Engineering and

Technology, K.Vellakulam

Madurai District

Submitted for the Anna University Project Viva-Voce examination held at Kamaraj College of Engineering and Technology on 29.04.2021.

INTERNAL EXAMINER

EXTERNAL EXAMINER

WIRELESS SYSTEM TO MONITOR FOOD GRAIN STORAGE

A PROJECT REPORT

Submitted by

SUNDARAPRIYA.S

DHANYA SHRI.B

PRIYADHARSHINI.S

in partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

**DEPARTMENT OF ELECTRONICS AND
COMMUNICATION ENGINEERING
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY**
(An Autonomous Institution Affiliated to Anna University, Chennai)
K.VELLAKULAM-625 701(Near Virudhunagar)

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K. VELLAKULAM – 625701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report entitled **"WIRELESS SYSTEM TO MONITOR FOOD GRAIN STORAGE"** is the bonafide record of EC8811-Project work done by **SUNDARAPRIYA.S** (920417106105), **DHANYA SHRI.B** (920417106024) and **PRIYADHARSHINI.S**(920417106078) of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project work under my super vision.

SIGNATURE	**SIGNATURE**
Dr. R. SURESH BABU,	**Dr. C. GEETHA PRIYA,**
HEAD OF THE DEPARTMENT,	**SUPERVISOR,**
PROFESSOR,	**PROFESSOR,**
Dept. of ECE,	Dept. of ECE,
Kamaraj College of	Kamaraj College of
Engineering & Technology,	Engineering& Technology,
K. Vellakulam,	K. Vellakulam,
Madurai - 625 701	Madurai - 625 701

Submitted for Anna University Project Viva-Voce examination held on
_28-04-2021_____.

INTERNAL EXAMINER   **EXTERNAL EXAMINER**

DESIGN OF METAMATERIAL BASED MICROSTRIP PATCH ANTENNA FOR BRAIN TUMOR DETECTION

PROJECT REPORT

Submitted by

MEERA DEVI.V

ANANTHI.M

DEEPIKA.K

GANKA DEVI.M

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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K.VELLAKULAM - 625 701 (Near Virudhunagar)

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution Affiliated to Anna University, Chennai)
K.VELLAKULAM - 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report entitled **"DESIGN OF METAMATERIAL BASED MICROSTRIP PATCH ANTENNA FOR BRAIN TUMOR DETECTION"** is the bonafide record of EC811-Project work done by **"MEERADEVI V (Reg No: 920417106060), ANANTHI M (Reg No: 920417106301), DEEPIKA K (Reg No: 920417106021), GANKADEVI (Reg No:920417106030)"** of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project work under my supervision.

SIGNATURE

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Dr.N.M.MARY SINDHUJA, M.E.,Ph.D

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Technology,

K.Vellakulam, Madurai.

INTERNAL EXAMINER

EXTERNAL EXAMINER

ANALYSIS OF ADULTERATION IN FOOD SAMPLES USING LIBS TECHNOLOGY

A PROJECT REPORT

Submitted by

Harini sri.M (920417106033)

Keerthiga.M (920417106050)

Rajadharshini.M (920417106081)

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

ELECTRONICS AND COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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K.VELLAKULAM-625701 (Near Virudhunagar)

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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K.VELLAKULAM-625701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report entitled "**ANALYSIS OF ADULTERATION IN FOOD SAMPLES USING LIBS TECHNOLOGY**" is the bonafide record of EC8811-Project Work done by "**HARINI SRI.M (Reg. No:920417106033), KEERTHIGA.M (Reg. No: 902417106050) and RAJADHARSHINI.M (920417106081)**" of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project work under my supervision.

SIGNATURE	**SIGNATURE**
Dr.R.SureshBabu, M.E.,M.B.A.,Ph.D.,	Mr.R.Ashok,M.E.,(Ph.D.,)
HEAD OF THE DEPARTMENT	SUPERVISOR
Professor,	Assistant Professor,
Department of Electronics and	Department of Electronics and
Communication Engineering,	Communication Engineering,
Kamaraj College of Engineering and	Kamaraj College of Engineering and
Technology,K.Vellakulam-625701.	Technology,K.Vellakulam-625701.
Near Virudhunagar , Madurai District.	Near Virudhunagar , Madurai District.

Submitted for the Anna University Project Viva-Voce examination held on
29-04-2021
……………….

INTERNAL EXAMINER   **EXTERNAL EXAMINER**

i

DESIGN OF SIX BIT DMTL PHASE SHIFTER FOR Ka BAND APPLICATION

PROJECT REPORT

Submitted by

B.Abirami (920417106002)

V.Keerthigadevi (920417106051)

S.Sivamathy (920417106095)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.VELLAKULAM-625 701(Near Virudhunagar)

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution Affiliated to Anna University, Chennai)
K.VELLAKULAM-625 701(Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report entitled **"DESIGN OF SIX BIT DMTL PHASE SHIFTER FOR Ka BAND APPLICATIONS"** is the bonafide work of EC8811-Project work done by **"ABIRAMI B (REG NO:920417106002), KEERTHIGA DEVI V (REG NO:920417106051), SIVAMATHY S (REG NO:920417106095)"** of final year Electronics and Communication Engineering during the academic year 2020-2021, who carried out the project work under my supervision.

SIGNATURE

SIGNATURE

Dr.R.SURESHBABU,M.E.,M.B.A.,Ph.D

Dr.N.M.MARYSINDHUJA,M.E.,Ph.D

HEAD OF THE DEPARTMENT,
Professor,

SUPERVISOR, Assistant Professor,

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Department of Electronics and
Communication Engineering,
Kamaraj College of Engineering and
Technology,
K.Vellakulam, Madurai District.

INTERNALEXAMINER

EXTERNALEXAMINER

Department of ECE

B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
(Regulations 2020 – Autonomous)

Sl. No	Category of Courses	Credits
1.	Foundation Courses - Humanities and Social Sciences including Management Courses, Basic Science and Engineering Science Courses (HS+BS+ES)	53
2.	Professional Core Courses (PC)	79
3.	Professional Elective Courses (PE)	12
4.	Open Elective Courses (OE)	06
5.	Employability Enhancement Courses (EEC)	13
6.	Online Courses (OL)	06
7.	Audit Courses (AU)	---
8.	Value Added Courses (VAC)	---
	Total	**169**

B.E – ECE (Credits Allocation to Individual Semesters)									
Semester	I	II	III	IV	V	VI	VII	VIII	**Total**
Credits	19	23	24	24	23	24	21	11	**169**

SI.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	CP5292	Internet of Things	PC	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
3.		Professional Elective VI	PE	3	3	0	0	3
PRACTICALS								
4.	NC5311	Project Work Phase I	EEC	12	0	0	12	6
			TOTAL	**21**	**9**	**0**	**12**	**15**

SEMESTER IV

SI. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
PRACTICALS								
1.	NC5411	Project Work Phase II	EEC	24	0	0	24	12
			TOTAL	**24**	**0**	**0**	**24**	**12**

TOTAL NO. OF CREDITS:70

CN1321 – PROJECT WORK (PHASE I)

M.E. COMMUNICATION AND NETWORKING

<u>Project Titles</u>

Year : II M.E. (C&N)　　　　　　　　Academic Year : 2021-22 ODD　　　　　　　　Semester : 03

Sl. No	Register No.	Name of the Student	Title of the Project	Name of the Guide
1	920420PCN01	ANU.K	An Adaptive method for Traffic Signal control based on Fuzzy Logic with Webster formula using Sumo traffic simulator	Dr.V.Jeyalakshmi
2	920420PCN02	BRESSHI.G	A Low noise amplifier design with high gain using CMOS Technology for eMBB (extremely Mobile Broadband) Application	Dr.R.Suresh Babu
3	920420PCN03	SWESHIKA.P	Design and performance analysis of High power amplifier MMIC in 40GHz using GaN for Satellite Communication	Dr.R.Suresh Babu
4	920420PCN04	NIVETHA.M	An Unequally Clustered Multi-Hop Routing Protocol based on Fuzzy logic for Wireless Sensor Networks	Mrs.S.Nisharani
5	920420PCN06	SAI ANIRUDH.R	Privacy Preserving in Criminal FIR data protection using Block chain Technology	Dr.R.Suresh Babu

HoD/ECE

AN ADAPTIVE METHOD FOR TRAFFIC SIGNAL CONTROL BASED ON FUZZY LOGIC WITH WEBSTER FORMULA USING SUMO TRAFFIC SIMULATOR

PHASE 1 REPORT

Submitted by

ANU.K
(920420PCN01)

in partial fulfillment for the award of the degree of

MASTER OF ENGINEERING IN
COMMUNICATION AND NETWORKING
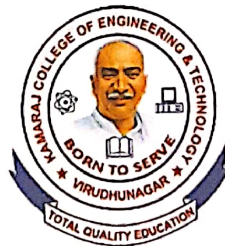
KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)
K.VELLAKULAM
JANUARY 2022

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)
K.VELLAKULAM

BONAFIDE CERTIFICATE

Certified that this Report titled "AN ADAPTIVE METHOD FOR TRAFFIC SIGNAL CONTROL BASED ON FUZZY LOGIC USING WEBSTER METHOD USING SUMO TRAFFIC SIMULATOR " is the bonafide work of ANU.K (Reg. No. 920420PCN01) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on earlier occasion on this or any other candidate.

Dr.R.SURESH BABU,M.E., M.B.A.,Ph.D.

Professor and Head

Department of Electronics and Communication Engineering

Kamaraj College of Engineering and Technology (Autonomous)

K. Vellakulam - 625701

Dr. V.Jeyalakshmi, M.E.,PH.D.,

Assistant Professor

Department of Electronics and Communication Engineering

Kamaraj College of Engineering and Technology (Autonomous)

K. Vellakulam – 625701

Submitted for Viva – Voce examination held on 6-01-2022

Internal Examiner

External Examiner

AN UNEQUALLY CLUSTERED MULTI-HOP ROUTING PROTOCOL BASED ON FUZZY LOGIC FOR WIRELESS SENSOR NETWORKS

PHASE 1 REPORT

Submitted by

NIVETHA M
(920420PCN04)

in partial fulfillment for the award of the degree of

MASTER OF ENGINEERING IN
COMMUNICATION AND NETWORKING

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)
K.VELLAKULAM
JANUARY 2022

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)
K.VELLAKULAM

BONAFIDE CERTIFICATE

Certified that this Report titled "AN UNEQUALLY CLUSTERED MULTI-HOP ROUTING PROTOCOL BASED ON FUZZY LOGIC FOR WIRELESS SENSOR NETWORKS" is the bonafide work of NIVETHA.M (Reg. No. 920420PCN04) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on earlier occasion on this or any other candidate.

Dr.R.SURESH BABU,M.E., M.B.A.,Ph.D.	**Mrs.S.NISHARANI, M.E.,(Ph.D.,)**
Professor and Head	Supervisor and Assistant Professor
Department of Electronics and Communication Engineering	Department of Electronics and Communication Engineering
Kamaraj College of Engineering and Technology (Autonomous)	Kamaraj College of Engineering and Technology (Autonomous)
K. Vellakulam - 625701	K. Vellakulam – 625701

Submitted for Viva – Voce examination held on 06.01.2022

Internal Examiner   **External Examiner**

A LOW NOISE AMPLIFIER DESIGN WITH HIGH GAIN UISING CMOS TECHNOLOGY FOR eMBB(extremely Mobile Broadband) APPLICATION

PHASE 1 REPORT

Submitted by

BRESSHI.G
(920420PCN02)

in partial fulfillment for the award of the degree of

MASTER OF ENGINEERING IN COMMUNICATION AND NETWORKING

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution)

K.VELLAKULAM

JANUARY 2022

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)
K.VELLAKULAM

BONAFIDE CERTIFICATE

Certified that this Report titled "A LOW NOISE AMPLIFIER DESIGN WITH HIGH GAIN USING CMOS TECHNOLOGY FOR eMBB(extremely mobile broadband)APPLICATION" is the bonafide work of BRESSHI.G (Reg. No. 920420PCN02) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on earlier occasion on this or any other candidate.

Dr.R.SURESH BABU,M.E., M.B.A.,Ph.D.,

Professor and Head

Department of Electronics and Communication Engineering

Kamaraj College of Engineering and Technology (Autonomous)

K. Vellakulam - 625701

Dr.R.SURESH BABU,M.E., M.B.A.,Ph.D.,

Supervisor and Professor

Department of Electronics and Communication Engineering

Kamaraj College of Engineering and Technology (Autonomous)

K. Vellakulam – 625701

Submitted for Viva – Voce examination held on ...06..0a.1..2022.

Internal Examiner

External Examiner

DESIGN AND PERFORMANCE ANALYSIS OF HIGH POWER AMPLIFIER MMIC IN 40GHZ USING GaN FOR SATELLITE COMMUNICATION

PHASE 1 REPORT

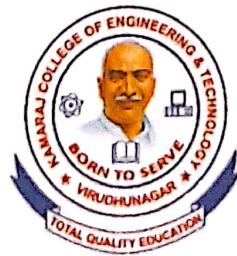*Submitted by*

SWESHIKA P
(920420PCN03)

in partial fulfillment for the award of the degree of

MASTER OF ENGINEERING IN COMMUNICATION AND NETWORKING

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)
K.VELLAKULAM
JANUARY 2022

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)
K.VELLAKULAM

BONAFIDE CERTIFICATE

Certified that this Report titled "DESIGN AND PERFORMANCE ANALYSIS OF HIGH POWER AMPLIFIER MMIC IN 40GHZ USING GaN FOR SATELLITE COMMUNICATION" is the bonafide work of SWESHIKA P (Reg. No. 920420PCN03) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation onthe basis of which a degree or award was conferred on earlier occasion on this or any othercandidate

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Submitted for Viva – Voce examination held on ..06..01..2022

InternalExaminer

ExternalExaminer

PRIVACY PRESERVING IN CRIMINAL FIR DATA PROTECTION USING BLOCKCHAIN TECHNOLOGY

PHASE 1 REPORT

Submitted by

SAI ANIRUDH R
(920420PCN06)

in partial fulfilment for the award of the degree of

MASTER OF ENGINEERING IN COMMUNICATION AND NETWORKING

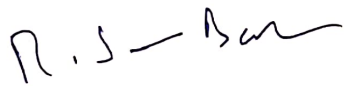# KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY

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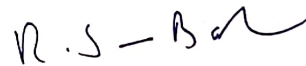
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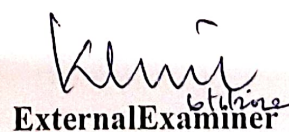Department of Electronics and Communication Engineering

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