

UNIT V CHASSIS AND SAFETY SYSTEMS

10

Traction control system – Cruise control system – electronic control of automatic transmission – antilock braking system – electronic suspension system – working of airbag and role of MEMS in airbag systems – centralized door locking system – climate control of cars.

TOTAL : 45 PERIODS

OUTCOMES:

After successful completion of this course, the students should be able to

CO1: Know the importance of emission standards in automobiles.

CO2: Understand the electronic fuel injection/ignition components and their function.

CO3: Choose and use sensors and equipment for measuring mechanical quantities, temperature and appropriate actuators.

CO4: Diagnose electronic engine control systems problems with appropriate diagnostic tools.

CO5: Analyses the chassis and vehicle safety system.

TEXT BOOK:

1. Ribbens, "Understanding Automotive Electronics", 8th Edition, Elsevier, Indian Reprint, 2013

REFERENCES

1. Barry Hollembeak, "Automotive Electricity, Electronics & Computer Controls", Delmar Publishers, 2001.
2. Richard K. Dupuy "Fuel System and Emission controls", Check Chart Publication, 2000.
3. Ronald. K. Jurgon, "Automotive Electronics Handbook", McGraw-Hill, 1999.
4. Tom Denton, "Automobile Electrical and Electronics Systems", Edward Arnold Publishers, 2000.

MT8811

PROJECT WORK

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OBJECTIVES:

- To develop knowledge to formulate a real world problem and project's goals.
- To identify the various tasks of the project to determine standard procedures.
- To identify and learn new tools, algorithms and techniques.
- To understand the various procedures for validation of the product and analysis the cost effectiveness.
- To understand the guideline to Prepare report for oral demonstrations.

Students in the form of group, not exceeding 3 members in a group to carry out their main project. It should be a Mechatronics project. However, special considerations can be given for interdisciplinary measurement and computer based simulation projects. This exception should be recorded and approved by the department committee. Management related projects will not be allowed. The interdisciplinary projects will carry more weight age. It is mandatory to publish their main project in national/international level conferences to appear in the viva-voce exam.

TOTAL: 300 PERIODS

OUTCOMES:

After successful completion of this course, the students should be able to

CO1: Design, analyze, realize / simulate a physical system by using the technology they learnt during the program.

CO2: Integrate various systems into one Mechatronics product.

CO3: Work in a team with confined time duration.

CO4: Disseminate his work both in oral and written format.

DEPARTMENT OF MECHATRONICS ENGINEERING

Subject Code & Name: MT 8811-Project Work Course Plan

Staff Name: Dr.K.Kannan, & Mr.A.Arulkumar & Mr.A.Ganesan

Class: IV MTRE Academic year : 2020-21 (Even)

OBJECTIVES:

- To develop knowledge to formulate a real world problem and project's goals.
- To identify the various tasks of the project to determine standard procedures.
- To identify and learn new tools, algorithms and techniques.
- To understand the various procedures for validation of the product and analysis the cost effectiveness.
- To understand the guideline to Prepare report for oral demonstrations.

Syllabus

Students are forming the group, not exceeding 3 members in a group to carry out their main project. It should be a Mechatronics project. However, special considerations can be given for interdisciplinary measurement and computer based simulation projects. This exception should be recorded and approved by the department committee. Management related projects will not be allowed. The interdisciplinary projects will carry more weight age. It is mandatory to publish their main project in national/international level conferences to appear in the viva-voce exam.

TOTAL: 300 PERIODS

Course Outcomes

Course Code: R17C412

On successful completion of this course, the students will be able:

Course Outcome No	Course Outcomes	Assessment Tools	Knowledge level
R17C424.1	To identify specific problems prevailing in the society or industry in the field of Mechatronics Engineering& allied areas. (K5-Analyze)	Review	K5
R17C424.2	To carry out the literature survey for the identified problem. (K4-Apply)	Review	K4
R17C424.3	Integrate various systems into one Mechatronics product.(K5-Analyze & Synthesis)	Review	K5
R17C424.4	To develop an appropriate solution for the identified problem using modern tool or methodology (K5-Analyze & Synthesis)	Review	K5

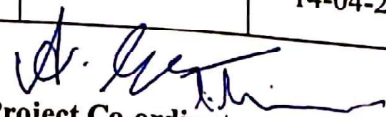
R17C424.5	To impart communication and presentation skills through effective documentation and delivery.(K4-Apply)	Review, Report	K4
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CO -PO MAPPING

Courses	CO	Program out comes												Program Specific outcomes	
		PO 1	PO 2	PO 3	PO 4	P O5	P O6	P O7	P O8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2
Project Work	R17C424.1	3	3	3	3	2	3	3	3	3	3	3	2	3	3
	R17C424.2	3	3	2	2	1	3	3	3	3	3	3	1	3	3
	R17C424.3	3	3	3	3	2	3	3	3	3	3	3	2	3	3
	R17C424.4	3	3	3	3	2	3	3	3	3	3	3	2	3	3
	R17C424.5	3	3	2	2	1	3	3	3	3	3	3	2	3	3
	R17C424	3	3	3	2	2	3	3	3	3	3	3	2	3	3

Tentative Dates for Project review

S.No	Review	Tentative Dates	Stages of completion
1.	Zeroth Review	06.02.2021	Title and the area with details (Industry or In house Project)
2.	First Review	27.02.2021	Title, Literature survey, Problem definition with objective, Conceptual design, methodology & process flow, etc.,
3.	Second Review	15.03.2021 To 17.03.2021	Development of design, Detailed drawings, simulation results and design calculations, Bill of Materials & Cost Estimation
4.	Third Review	12.04.2021 to 14-04-2021	Fabrication of model, Demonstration of working model, Project Report Preparation (Rough draft should be submitted for the review).


Project Co-ordinator


HoD/MTRE

Project Title				
Batch No.	Roll No.	Students Name	Project Title	Industry/In-house
4801	17UMTR002	EASHWAR.N.N	Real time image captioning with speech	In-house
	17UMTR003	ARAVINDA SUNDAR.M		
	17UMTR008	BENWIN STEWARD.J.S		
4802	17UMTR001	RAM DIWAKAR.R	Hydraulic assisted injection moulding machine	Industry
	17UMTR007	GANESAN M		
	17UMTR013	SUBASH.S		
4803	17UMTR006	INDRA PRAKASH.S	Color based segregater and transpoter model	Industry
	17UMTR043	SARAVANAN.M		
	17UMTR051	AJAY RAHUL.S		
4804	17UMTR022	DAVID LAZER.A	Smart plant monitoring robot	In-house
	17UMTR024	SHANMUGA PERUMAL.B		
	17UMTR046	SHERWIN SAM.S		
4805	17UMTR009	GIRIDHARI.S	PROSTHETIC ARM CONTROLLED BY MUSCLE ELECTROMYOGRAPHY	In-house
	17UMTR016	KAMALANATHAN.S		
	17UMTR037	AJAI.J		
4806	17UMTR044	SABARI.S	VISION BASED PATH PLANNING ROBOT	In-house
	17UMTR052	HONEST RAJ.V		
	17UMTR056	ASHWIN.T		
4807	17UMTR054	KOWSIKNIVAS.A	SMART SAFETY DEVICE IN MINES	Industry
	17UMTR055	VENKATESHVARAN.G		
	17UMTR061	RAMAR SELVAM.C		
4808	17UMTR004	DHANABALAN.K	ANDROID CONTROLLED PICK AND PLACE ROBOTIC VEHICLE	In-house
	17UMTR042	SELVAKUMAR.S		
	17UMTR053	VISWANATH.S		
4809	17UMTR048	UBEN KARTHICK.R.G	AUTOMOBILE BLACK BOX FOR TRACKING AND EMERGENCY SYSTEM	In-house
	17UMTR057	HARIKRISHNA.M		
4810	17UMTR010	BALA VISHNU PRAKASH.M	IoT BASED HEALTH CARE MONITORING SYSTEM	In-house
	17UMTR020	AAKASH.J		
	17UMTR029	MAREESWARAN.M		
4811	17UMTR011	MATHESH KUMAR.P	DEVELOPING A SEMI AUTOMATIC PVC PIPE BENDING MACHINE USING PNEUMATICS	Industry
	17UMTR030	SURYA PRAKASH.S		
	17UMTR049	VENKATESH.G		
4812	17UMTR028	PRABHU.D.M	ACCIDENT PREVENTION IN BUTTERPACKING MACHINE USING INDUCTIVE SENSOR	Industry
	17UMTR032	KISHORE.S		
	17UMTR038	NIKILKUMAR.R.K		
4813	17UMTR018	PRABHA.G	AUTOMATIC FIRE EXTINGUISHER ROBOT	In-house
	17UMTR019	SHANKARANARAYANAN.S		
	17UMTR036	KARTHICK RAJA.P		
4814	17UMTR023	SHAHID AFRID.M	MANAGEMENT OF GARBAGE BINS VIA AUTOMATION	Industry
	17UMTR027	SAI SETHURAMAN.M		
	17UMTR045	ALLWYN ANTONY ROY.J		
4815	17UMTR050	SANKAR.R	MODIFIED MILK PACKAGING MACHINE	Industry
	17UMTR059	MUKESH KANNAN.B		
	17UMTR060	ABISHEK .S		
4816	17UMTR012	VIJAY.S	AUTOMATIC RAILWAY PLATFORM	In-house
	17UMTR015	KAVIYARASAN.M		
	16UMTR022	MOHAMED RIYAS.S		
4817	17UMTR021	KARTHIKEYAN.V	HUMAN ERROR ELIMINATION IN PAINT-FILLING MACHINE	Industry
4818	17UMTR025	DEEPARAJ ANNAMALAI.C	IMPLEMENTATION OF SLAM BASED AUTONOMOUS NAVIGATION	Industry
	17UMTR026	DEV AJAY KUMAR.V.S		
	17UMTR031	ABISHEK SAMUEL BABU		
4819	17UMTR033	AJMAL.D	AUTOMATIC BLOWDOWN SYSTEM FOR REMOVING SCALES IN BOILER USING TDS	Industry
	17UMTR041	SARAN.V.J		
4820	17UMTR005	SIVAHARISH.N	REMOTE CONTROLLED SOLAR POWERED PESTICIDE SPRAYER	In-house
	17UMTR014	DINESHKUMAR.K		

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REAL TIME IMAGE CAPTIONING WITH SPEECH

A PROJECT REPORT

Submitted by

ARAVINDASUNDAR.M (920417115008)

BENWIN STEWARD.S (920417115011)

EASHWAR.N.N (920417115017)

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

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K .VELLAKULAM -625 701 (Near Virudhunagar), MADURAI.

May 2021

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BONAFIDE CERTIFICATE

Certified that this project report “**REAL TIME IMAGE CAPTIONING WITH SPEECH**” is the bonafide work of “**ARAVINDASUNDAR.M (920417115008), EASHWAR.N.N (920417115017), BENWIN STEWARD.J.S (920417115011)**” who carried out the project work under my supervision.



SIGNATURE

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SIGNATURE

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Submitted for the Viva –Voce Examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

**HYDRAULIC ASSISTED INJECTION MOLDING MACHINE
A PROJECT REPORT**

Submitted by

GANESAN.M (920417115018)
RAM DIWAKAR. R (920417115036)
SUBASH.S (920417115048)

In partial fulfilment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



**DEPARTMENT OF MECHATRONICS ENGINEERING
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
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APRIL2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
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BONAFIDE CERTIFICATE

Certified that this project report “**HYDRAULIC ASSISTED INJECTION MOLDING MACHINE**” is the bonafide work of “**GANESAN.M (920417115018) RAM DIWAKAR. R (920417115036) SUBASH.S (920417115048)**” who carried out the project work under my supervision.



SIGNATURE

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Submitted for the Viva –Voce Examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

RAJ KRISHNA WIRE PROCESS

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48 Bypass Rd, near State Bank of India, SS Colony, Madurai-625010

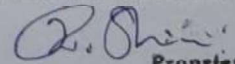
Phone: 9047170815, 9843262240, Email: rkwmadurai@gmail.com

Date:

To Whom It May Concern

This is to Certify that **Mr. RAM DIWAKAR. R(920417115036)** of Final Year, B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, Near Virudhunagar, Madurai District has successfully completed his project on **“HYDRAULIC ASSISTED INJECTION MOLDING MACHINE”** From 11/02/2021 To 26/03/2021. During the period, he was very punctual, hard working and his behavior was good.

For RAJ KRISHNA WIRE PROCESS


Proprietor

RAJ KRISHNA WIRE PROCESS

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Madurai - 625010

RAJ KRISHNA WIRE PROCESS

GST NO 33AFUPR8739Q1Z4

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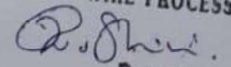
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To Whom It May Concern

This is to Certify that **Mr.GANESAN.M(920417115018)** of Final Year, B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, Near Virudhunagar, Madurai District has successfully completed his project on “**HYDRAULIC ASSISTED INJECTION MOLDING MACHINE**” From 11/02/2021 To 26/03/2021. During the period, he was very punctual, hard working and his behavior was good.

For RAJ KRISHNA WIRE PROCESS


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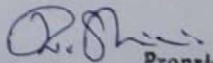
Phone: 9047170815, 9843262240, Email: rkwmadurai@gmail.com

Date:

To Whom It May Concern

This is to Certify that **Mr.SUBASH.S(920417115048)** of Final Year, B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, Near Virudhunagar, Madurai District has successfully completed his project on "**HYDRAULIC ASSISTED INJECTION MOLDING MACHINE**" From 11/02/2021 To 26/03/2021. During the period, he was very punctual, hard working and his behavior was good.

For RAJ KRISHNA WIRE PROCESS


Proprietor

RAJ KRISHNA WIRE PROCESS
48, Bye-Pass Road
(Near Vinayaga Body Building)
Madurai - 625010

COLOR BASED SEGREGATER AND TRANSPOTER MODEL

A PROJECT REPORT

Submitted by

AJAY RAHUL S (920417115004)

INDRAPRAKSH S (920417115023)

SARAVANAN M (920417115041)

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING

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APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
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K.VELLAKULAM - 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report “**COLOUR BASED SEGREGATER AND TRANSPOTER MODEL**” is the bonafide work of “**AJAY RAHUL. S, INDRA PRAKSH. S, SARAVANAN. S**” who carried out the project under my supervision.



SIGNATURE

Dr. K. KANNAN M.E., M.E., Ph.D.,
HEAD OF THE DEPARTMENT

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Madurai - 625701



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Assistant Professor
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Submitted for the Viva –Voce Examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

A.V.K.K.N MILLS

6/527, PETANACHI NAGAR,

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Ph.no: 9787502754

Mail: avkknaratjanadar@gmail.com

TO WHOM IT MAY CONCERN

This is to certify that S. AJAY RAHUL (920417115051) of final year B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, virudhunagar has successfully completed his project on "**Colour based segregator and transporter**" **from** 04.03.2021 to 20.03.2021. During the period, he was very punctual, hardworking and his behaviour was good.

For AVKKN MILLS



A.V.K.K.N MILLS

5/527, PETANACHI NAGAR,

Virudhunagar

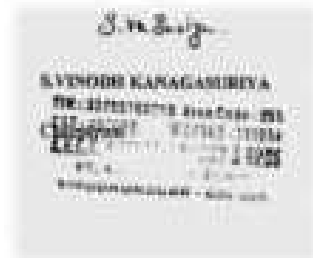
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TO WHOM IT MAY CONCERN

This is to certify that S. INDRA PRAKASH (920417115023) of final year B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, virudhunagar has successfully completed his project on "**Colour based segregator and transporter**" from 04.03.2021 to 20.03.2021. During the period, he was very punctual, hardworking and his behaviour was good.

For AVKKN MILLS



SMART PLANT MONITORING ROBOT

PROJECT REPORT

Submitted by

DAVID LAZER A (920417115012)

SHANMUGA PERUMAL B (920417115045)

SHERWIN SAM S (920417115046)

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

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DEPARTMENT OF MECHATRONICS ENGINEERING
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APRIL 2021

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BONAFIDE CERTIFICATE

Certified that the project report "SMART PLANT MONITORING ROBOT" is the bonafide work of "A.DAVID LAZER (920417115012), B.SHANMUGA PERUMAL (920417115045) & S.SHERWIN SAM (920417115046)" who carried out the project work under my supervision"



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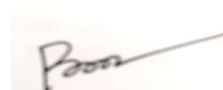
Kamaraj College of Engg & Tech,

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Submitted for the Viva Voce Examination held on 28/04/2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

PROSTHETIC ARM CONTROLLED BY MUSCLE ELECTROMYOGRAPHY

A PROJECT REPORT

Submitted by

AJAI.J (920417115003)

GIRIDHARI.S (920417115019)

KAMALA NATHAN.S (920417115024)

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in



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**DEPARTMENT OF MECHATRONICS ENGINEERING
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BONAFIDE CERTIFICATE

Certified that the project report “PROSTHETIC ARM CONTROLLED BY MUSCLE ELECTROMYOGRAPHY” is the bonafide work of “AJAI.J (920417115003), GIRIDHARI.S (920417115019), and KAMALA NATHAN (920417115034)” who carried out the project work under my supervision.



SIGNATURE

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Submitted for the Viva-Voce Examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

VISION BASED PATH PLANNING ROBOT

PROJECT REPORT

Submitted by

ASHWIN T (920417115009)

HONEST RAJ V (920417115021)

SABARI S (920417115037)

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING



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April 2021

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BONAFIDE CERTIFICATE

Certified that this project report “ VISION BASED PATH PLANNING ROBOT” is the bonafide work of “SABARI .S (920417115037), HONEST RAJ .V(920417115021), ASHWIN.T(920417115009)” who carried out the project under my supervision.



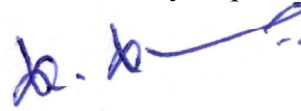
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Submitted for viva-voce examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

SMART SAFETY DEVICE IN MINES

PROJECT REPORT

Submitted by

KOWSIKNIVAS A (920417115029)

VENKATESHVARAN G (920417115053)

RAMARSELVAM C (920417115301)

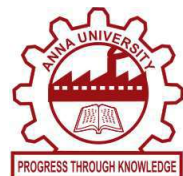
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KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(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 the project “**SMART SAFETY DEVICE IN MINES**” is the bonafide work of “**KOWSIKNIVAS A (17UMTR054), VENKATESHVARN G (17UMTR055), RAMARSELVAM C (17UMTR061)**” Who carried out the project work under my supervision.



SIGNATURE

Dr. K.KANNAN, M.E, M.E, Ph.D

Head of the Department,

Associate Professor,

Dept. of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K.Vellakulam, Madurai.



SIGNATURE

Mr. S.WESLEY MOSES

SAMDOSS, M.E, (Ph.D)

Assistant Professor,

Dept. of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K.Vellakulam, Madurai.

Submitted for viva-voce examination held on : 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER



NLC INDIA LIMITED
'NAVRATNA' – (Government of India Enterprise)
NEYVELI, TAMIL NADU

PROJECT CERTIFICATE

This is to certify that the Project work entitled “**SMART SAFETY DEVICE IN MINES**” is a Bonafide record of the work done by,

1. G. VENKATESHVARAN (17UMTR055) - UNIV REG No: 920417115053
2. A. KOWSIKNIVAS (17UMTR054) - UNIV REG No: 920417115029
3. C. RAMARSELVAM (17UMTR061) - UNIV REG N0: 920417115302

In partial fulfillment of the requirements for the award of BACHELOR DEGREE in MECHATRONICS ENGINEERING from KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY, NEAR VIRUDHUNAGAR, MADURAI during the period of 12-03-2021 to 08-04-2021 at LIGNITE BENCH (Bunker) MINES-1A, NLC INDIA LIMITED, NEYVELI.

ACM / Lignite Bench

Mine-1A, NLC India Ltd.

Permitted to submit the report to college/university & conference authorities.

Place: Neyveli

Date: 08/ 04/ 2021

Chief Manager / SD

Learning and Development Centre,

NLC India Ltd, Neyveli.

ANDROID CONTROLLED PICK AND PLACE ROBOTIC VEHICLE

PROJECT REPORT

Submitted by

SELVA KUMAR S	(920417115007)
DHANABALAN K	(920417115038)
VISWANATH S	(920417115043)

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



**DEPARTMENT OF MECHATRONICS 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 report “**ANDROID CONTROLLED PICK AND PLACE ROBOTIC VEHICLE**” is the Bonafide work of “**SELVAKUMAR S(920417115042), DHANABALAN K (920417115015),VISWANATH S(920417115056)**” Who carried out the project work under my supervision.



SIGNATURE

Dr. K. KANNAN

Head of the Department,

Dept. of Mechatronics Engineering

Kamaraj college of Engg & Tech,

Madurai-625701,

Tamilnadu



SIGNATURE

Mr. A. ARULKUMAR M.E.

Assistant Professor,

Dept. of Mechatronics Engineering

Kamaraj college of Engg & Tech,

Madurai-625701,

Tamilnadu.

Submitted for viva-voce examination held on : 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

AUTOMOBILE BLACK BOX FOR TRACKING AND EMERGENCY SYSTEM

PROJECT REPORT

Submitted by

HARIKRISHNA.M (920417115020)

UBEN KARTHICK.R.G (920417115050)

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



**DEPARTMENT OF MECHATRONICS 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 the project report "AUTOMOBILE BLACK BOX FOR TRACKING AND EMERGENCY SYSTEM" is the bonafide work of "HARIKRISHNA.M (920417115020) AND UBEN KARTHICK.R.G (920417115050)" who carried out the project work under my supervision"



SIGNATURE

Dr.K.KANNAN.PH.D,

Head of the Department,

Associate Professor,

Dept. of Mechatronic Engineering,
Kamaraj College of Engg & Tech,
K.Vellakulam, Madurai



SIGNATURE

G.SAKTHIVEL.M.E.,

SUPERVISOR , Assistant Professor,

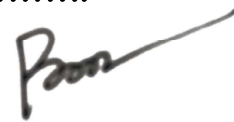
Dept. of Mechatronics Engineering,

Kamaraj College of Engg & Tech,
K.Vellakulam, Madurai

The project report submitted for the viva voce held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

IoT BASED HEALTH CARE MONITORING SYSTEM

A PROJECT REPORT

Submitted by

J. AAKASH

920417115001

M. BALA VISHNU PRAKASH

920417115010

M. MAREESWARAN

920417115030

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING



KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

K. VELLAKULLAM – 625 701 (NEAR VIRUDHUNAGAR)

APRIL 2021

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY,
CHENNAI)

K. VELLAKULLAM – 625 701 (NEAR VIRUDHUNAGAR)

BONAFIDE CERTIFICATE

Certified that this project report “**IoT BASED HEALTH CARE MONITORING SYSTEM**” is the bonafide work of “**J. AAKASH, M. BALA VISHNU PRAKASH, M. MAREESWARAN**” who carried out the project under my supervision.



SIGNATURE

Dr. K. KANNAN M.E., M.E., Ph.D.,

HEAD OF THE DEPARTMENT

Mechatronics Engineering

Kamaraj College of Engineering and
Technology (Autonomous)

Madurai - 625 701



SIGNATURE

Mr. A. GANESAN M.E.,

SUPERVISOR

Assistant professor of Mechatronics Engineering

Kamaraj College of Engineering and Technology
(Autonomous)

Madurai - 625 701

Submitted for the Viva –Voce Examination held on _____



INTERNAL EXAMINER



EXTERNAL EXAMINER

DEVELOPING A SEMI AUTOMATIC PVC PIPE BENDING MACHINE USING PNEUMATICS

A PROJECT REPORT

Submitted by

MATHESH KUMAR . P (920417115031)

SURYA PRAKASH . S (920417115049)

VENKATESH . G (920417115052)

in partial fulfillment for the award of the degree

of

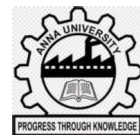
BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING



KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.VELLAKULAM – 625 701 (Near Virudhunagar)

APRIL 2021

DEVELOPING A SEMI AUTOMATIC PVC PIPE BENDING MACHINE USING PNEUMATICS

A PROJECT REPORT

Submitted by

MATHESH KUMAR . P (920417115031)

SURYA PRAKASH . S (920417115049)

VENKATESH . G (920417115052)

in partial fulfillment for the award of the degree

of

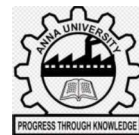
BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS 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 “**DEVELOPING A SEMI AUTOMATIC PVC PIPE BENDING MACHINE USING PNEUMATICS**” is the bonafide work of “**MATHESH KUMAR. P (920417115031), SURYA PRAKASH. S (920417115049) & VENKATESH. G (920417115052)** ” who carried out the project under my supervision.



SIGNATURE

Dr. K. KANNAN, M.E., M.E., Ph.D.,

HEAD OF THE DEPARTMENT

Associate Professor,

Dept. of Mechatronics Engineering

Kamaraj College of Engg & Tech,

K.Vellakulam , Madurai - 625 701



SIGNATURE

Dr. K. KANNAN, M.E., M.E., Ph.D.,

SUPERVISOR

Associate Professor

Dept. of Mechatronics Engineering

Kamaraj College of Engg & Tech,

K.Vellakulam ,Madurai - 625 701

Submitted for viva-voce examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

RAJ KRISHNA WIRE PROCESS

GST NO 33AFUPR8739Q1Z4

48 Bypass Rd, near State Bank of India, SS Colony, Madurai-625010

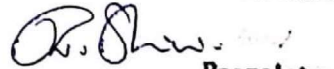
Phone: 9047170815, 9843262240, Email: rkwmadurai@gmail.com

Date:

To Whom It May Concern

This is to certify that Mr.MATHESH KUMAR .P (920417115031) of final year, B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, near Virudhunagar, Madurai district has successfully completed his project on **“DEVELOPING A SEMI AUTOMATIC PVC PIPE BENDING MACHINE USING PNEUMATICS ”** from 11/02/2021 to 26/03/2021. During the period, he was very punctual, hard working and his behavior was good.

For RAJ KRISHNA WIRE PROCESS


Proprietor

RAJ KRISHNA WIRE PROCESS

48, Bye-Pass Road

(Near Vinayaga Body Building)

Madurai - 625010

RAJ KRISHNA WIRE PROCESS

GST NO 33AFUPR8739Q1Z4

48 Bypass Rd, near State Bank of India, SS Colony, Madurai-625010

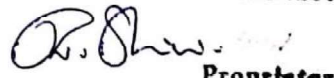
Phone: 9047170815, 9843262240, Email: rkwmadurai@gmail.com

Date:

To Whom It May Concern

This is to certify that Mr.SURYA PRAKASH . S (920417115049) of final year, B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, near Virudhunagar, Madurai district has successfully completed his project on “**DEVELOPING A SEMI AUTOMATIC PVC PIPE BENDING MACHINE USING PNEUMATICS**” from 11/02/2021 to 26/03/2021. During the period, he was very punctual, hard working and his behavior was good.

For RAJ KRISHNA WIRE PROCESS


Proprietor

RAJ KRISHNA WIRE PROCESS

48, Bye-Pass Road

(Near Vinayaga Body Building)

Madurai - 625010

RAJ KRISHNA WIRE PROCESS

GST NO 33AFUPR8739Q1Z4

48 Bypass Rd, near State Bank of India, SS Colony, Madurai-625010


Phone: 9047170815, 9843262240, Email: rkwmadurai@gmail.com

Date:

To Whom It May Concern

This is to certify that Mr. VENKATESH . G (920417115052) of final year, B.E Mechatronics Engineering from Kamaraj College of Engineering and Technology, near Virudhunagar, Madurai district has successfully completed his project on “**DEVELOPING A SEMI AUTOMATIC PVC PIPE BENDING MACHINE USING PNEUMATICS** ” from 11/02/2021 to 26/03/2021. During the period, he was very punctual, hard working and his behavior was good.

For RAJ KRISHNA WIRE PROCESS


Proprietor

RAJ KRISHNA WIRE PROCESS
48, Bye-Pass Road
(Near Vinayaga Body Building)
Madurai - 625010

ACCIDENT PREVENTION IN BUTTERPACKING MACHINE USING INDUCTIVE SENSOR

A PROJECT REPORT

Submitted by

S.KISHORE

920417115028

R.K.NIKIL KUMAR

920417115033

D.M.PRABHU

920417115035

In partial fulfilment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS 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 the project report “ACCIDENT PREVENTION IN BUTTER PACKING MACHINE USING INDUCTIVE SENSOR” is the bonafide work of “D.M.PRABHU (17UMTR038) , KISHORE.S(17UMTR032) & NIKIL KUMAR.R.K(17UMTR038) ”who carried out the project work under my supervision



SIGNATURE

Dr.K.KANNAN,
M.E,M.E,Ph.D,
Head of the Department,
Associate Professor,
Department of Mechatronics Engineering,
Kamaraj College of Engineering and Technology,
k.vellakulam, Madurai.



SIGNATURE

Mr.WESLEY MOSES SAMDOSS,
M.E,(Ph.d)
SUPERVISOR,Assistant Professor,
Department of Mechatronics
Engineering,
Kamaraj College of Engineering
And Technology
k.vellakulam, Madurai.

Submitted for viva-voce examination held on : 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER



1301, The Madurai District Cooperative Milk
Producers' Union Limited,
Sivagangai Main Road, Sathamangalam, Madurai 625 020.

Date: 31.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.D.M.Prabhu (Roll.No.17UMTR028), pursuing B.E Mechatronics at Kamaraj College of Engineering & Technology Madurai has undergone Project Work from 18th February 2021 to 31th March 2021.

During the above period, his involvement in the subject & conduct was *good*.

Deputy Manager (office)





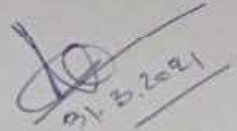
1301, The Madurai District Cooperative Milk
Producers' Union Limited,
Sivagangal Main Road, Sathamangalam, Madurai 625 020.

Date: 31.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.S.Kishore (Roll.No.17UMTR032), pursuing B.E
Mechatronics at Kamaraj College of Engineering & Technology Madurai has
undergone Project Work from 18th February 2021 to 31th March 2021.

During the above period, his involvement in the subject & conduct was
good.


31.3.2021

Deputy Manager (office)





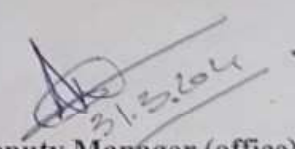
1301. The Madurai District Cooperative Milk Producers' Union Limited,
Sivagangai Main Road, Sathamangalam, Madurai 625 020.

Date: 31.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.R.K.Nikil kumar (Roll.No.17UMTR038), pursuing B.E Mechatronics at Kamaraj College of Engineering & Technology Madurai has undergone Project Work from 18th February 2021 to 31th March 2021.

During the above period, his involvement in the subject & conduct was good.


Deputy Manager (office)



AUTOMATIC FIRE EXTINGUISHER ROBOT

A PROJECT REPORT

Submitted by

KARTHICK RAJA P (920417115025)

PRABHA G (920417115034)

SHANKARANARAYANAN S (920417115044)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.VELLAKULAM-625701(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 “AUTOMATIC FIRE EXTINGUISHER ROBOT” is the bonafide work of “KARTHICK RAJA P (920417115025), PRABHA G (920417115034), SHANKARANARAYANAN S (920417115044)” who carried out the project work under my supervision.



SIGNATURE

Dr.K.KANNAN

HEAD OF THE DEPARTMENT

Associate professor

Dept. of Mechatronics Engineering

Kamaraj College of Engg&tech

K.Vellakulam, Madurai



SIGNATURE

Mr.P.BALASUNDAR

SUPERVISOR

Assistant Professor

Dept. of Mechatronics Engineering

Kamaraj College of Engg&tech,

K.Vellakulam, Madurai

Submitted for the Viva-Voce Examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

MANAGEMENT OF GARBAGE BINS VIA AUTOMATION

PROJECT REPORT
Submitted by

ALLWYN ANTONY ROY J	(920417115007)
SAI SETHURAMAN M	(920417115038)
SHAHID AFRIDI M	(920417115043)

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING



KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K. VELLAKULAM - 625 701 (Near Virudhunagar)

APRIL 2021

MANAGEMENT OF GARBAGE BINS VIA AUTOMATION

PROJECT REPORT
Submitted by

ALLWYN ANTONY ROY J	(920417115007)
SAI SETHURAMAN M	(920417115038)
SHAHID AFRIDI M	(920417115043)

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

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DEPARTMENT OF MECHATRONICS 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 “**MANAGEMENT OF GARBAGE BINS VIA AUTOMATION**” is the bonafide work of “**ALLWYN ANTONY ROY J (17UMTR045), SAI SETHURAMAN M (17UMTR027) & SHAHID AFRIDI M (17UMTR023)**” who carried out the project under my supervision.



SIGNATURE

Dr.K. KANNAN

Head of the Department,

Associate Professor,

Dept. of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K. Vellakulam, Madurai.



SIGNATURE

Mr.G. SAKTHIVEL

SUPERVISOR,

Associate Professor,

Dept. of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K. Vellakulam, Madurai.

The project report submitted for the viva voce held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

The Silicon Harvest

Driven by Innovation



PROJECT COMPLETION CERTIFICATE

Date: 31.03.2021

This is to certify that **J. ALLWYN ANTONY ROY** final year students of **MTRE** Department from **KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY**, Virudhunagar, have successfully completed his project work titled “**MANAGEMENT OF GARBAGE BINS VIA AUTOMATION**” in our concern from 08-Feb-2021 to 31-Mar-2021. During this project tenure his conduct was good. We wish him all success for his future endeavors.

FOR THE SILICON HARVEST

THE SILICON HARVEST
80, YANNAIKKAL, MADURAI-1
Ph: 0452 - 4383583

Dr.E.Sakthivel M.E., Ph.D., M.B.A
(Director)

80, Second Floor, Yanaikkal, Simmakal, Madurai-625 001.

0452 4383583 98421 73530, 94437 83583 info@siliconharvest.net www.siliconharvest.net



The Silicon Harvest

Driven by Innovation

PROJECT COMPLETION CERTIFICATE

Date: 31.03.2021

This is to certify that **M. SAI SETHURAMAN** final year students of **MTRE** Department from **KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY**, Virudhunagar, have successfully completed his project work titled “ **MANAGEMENT OF GARBAGE BINS VIA AUTOMATION** ” in our concern from 08-Feb-2021 to 31-Mar-2021. During this project tenure his conduct was good. We wish him all success for his future endeavors.

FOR THE SILICON HARVEST

THE SILICON HARVEST
80, YANNAIKKAL, MADURAI-1
Ph: 0452 - 4383583

Dr.E.Sakthivel M.E., Ph.D., M.B.A
(Director)

80, Second Floor, Yanaikkal, Simmakal, Madurai-625 001.

0452 4383583 98421 73530, 94437 83583 info@siliconharvest.net www.siliconharvest.net

The Silicon Harvest

Driven by Innovation



PROJECT COMPLETION CERTIFICATE

Date: 31.03.2021

This is to certify that **M. SHAHID AFRIDI** final year students of **MTRE** Department from **KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY**, Virudhunagar, have successfully completed his project work titled “ **MANAGEMENT OF GARBAGE BINS VIA AUTOMATION** ” in our concern from 08-Feb-2021 to 31-Mar-2021. During this project tenure his conduct was good. We wish him all success for his future endeavors.

FOR THE SILICON HARVEST

THE SILICON HARVEST
80, YANNAIKKAL, MADURAI-1
Ph: 0452 - 4383583

Dr.E.Sakthivel M.E., Ph.D., M.B.A
(Director)

📍 # 80, Second Floor, Yanaikkal, Simmakal, Madurai-625 001.

☎ 0452 4383583 📞 98421 73530, 94437 83583 ✉ info@siliconharvest.net 🌐 www.siliconharvest.net

MODIFIED MILK PACKAGING MACHINE

(MMPM)

PROJECT REPORT

Submitted by

MUKESH KANNAN B

(920417115032)

SANKAR R

(920417115039)

ABISHEK S

(920417115301)

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS 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 “**MODEFIED MILK PACKAGING MACHINE (MMPM)**” is the bonafide work of “**SANKAR R (17UMTR050), MUKESH KANNAN B (17UMTR059) & ABISHEK S (17UMTR060)**” who carried out the project under my supervision.



SIGNATURE

Dr.K. KANNAN

Head of the Department,

Associate Professor,

Dept. of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K. Vellakulam, Madurai.



SIGNATURE

Mr.A. GANESAN

SUPERVISOR,

Associate Professor,

Dept. of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K. Vellakulam, Madurai.



INTERNAL EXAMINER



EXTERNAL EXAMINER




A.1301. The Madurai District Cooperative Milk
Producers' Union Limited,
Sivagangai Main Road, Sathamangalam, Madurai 625 020.

Date: 12.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Thiru.R.Sankar.(RegisterNo.17UMTR050), pursuing IV year B.E (Mechatronics) at Kamaraj College of Engineering & Technology, Viruthunagar, has undergone project work for the Eight semester from 08 February 2021 to 10 March 2021.

During the above period, her involvement in the subject & conduct was good.


Manager (Admin)






A.1301. The Madurai District Cooperative Milk
Producers' Union Limited,
Sivagangai Main Road, Sathamangalam, Madurai 625 020.

Date: 12.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Thiru.B.Mukesh Kannan.(RegisterNo.17UMTR059),
pursuing IV year B.E (Mechatronics) at Kamaraj College of Engineering &
Technology, Viruthunagar, has undergone project work for the Eight semester
from 08 February 2021 to 10 March 2021.

During the above period, her involvement in the subject & conduct was
good.


Manager (Admin)





A.1301. The Madurai District Cooperative Milk
Producers' Union Limited,
Sivagangai Main Road, Sathamangalam, Madurai 625 020.

Date: 12.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Thiru.S.Abishek.(RegisterNo.17UMTR060), pursuing IV year B.E (Mechatronics) at Kamaraj College of Engineering & Technology, Viruthunagar, has undergone project work for the Eight semester from 08 February 2021 to 10 March 2021.

During the above period, her involvement in the subject & conduct was good.


Manager (Admin)



AUTOMATIC RAILWAY PLATFORM

PROJECT REPORT

Submitted by

KAVIYARSAN M (920417115027)

VIJAY S (920417115055)

MOHAMED RIYAS S (920417115501)

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING IN MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS 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 the project report " **AUTOMATIC RAILWAY PLATFORM**" is the bonafide work of " **KAVIYARSAN M (920417115027) MOHAMED RIYAS S (920417115501) & VIJAY S (920417115055)**" who carried out the project work under my supervision.



SIGNATURE

Dr.K.KANNAN, M.E., M.E., Ph.D.,

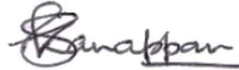
Head of the Department,

Associate Professor,

Dept. of Mechatronic Engineering,

Kamaraj College of Engg &Tech,

K.Vellakulam, Madurai



SIGNATURE

S.KANNAPPAN, M.E.,

SUPERVISOR , Assistant Professor,

Dept. of Mechatronics Engineering,

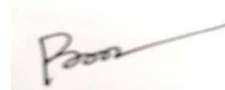
Kamaraj College of Engg & Tech,

K.Vellakulam, Madurai

Submitted for the Viva Voce Examination held on 28/04/2021.



INTERNAL EXAMINER



EXTERNAL EXAMINER

HUMAN ERROR ELIMINATION IN PAINT-FILLING MACHINE

A PROJECT REPORT

Submitted by

KARTHIKEYAN.V (920417115026)

In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS 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 “**Human Error Elimination in Paint-Filling Machine**” is the bonafide work of “**V. KARTHIKEYAN (920417115026)**” who carried out the project work under my supervision.



SIGNATURE

Dr. K. KANNAN, M.E., M.E., Ph.D.,

HEAD OF THE DEPARTMENT,

Associate Professor

Dept. of Mechatronics Engineering,

Kamaraj college of Engineering and

Technology,

K. Vellakulam, Madurai – 625 701,



SIGNATURE

Mr. S. WESLEY MOSES

SAMDOSS, M.E., (Ph.D.)

SUPERVISOR,

Assistant Professor

Dept. of Mechatronics Engineering,

Kamaraj college of Engineering and
Technology

K. Vellakulam, Madurai – 625 701,

Submitted for viva-voce examination held on : 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER



March 1, 2021

CERTIFICATE

This is to certify that **Mr KARTHIKEYAN V**, (ID No. 17umtr021) pursuing B.E – Mechatronics Engineering from Kamaraj College of Engineering & Technology has done a Project on the topic **“HUMAN ERROR ELIMINATION IN PAINTFILLING MACHINE”** from 28/01/2021 to 27/02/2021.

During this period he was found hardworking and sincere.

We wish him every success in future Endeavour.

for Nippon Paint India Pvt Ltd.,

A handwritten signature in black ink, appearing to be 'S Arun', written over a faint rectangular stamp.

Director Manufacturing

NIPPON PAINT (INDIA) PRIVATE LIMITED

Regd. Office : Plot No. K-8(I), Phase - II, SIPCOT Industrial Park, Mambakkam Village, Sriperumbudur, Sunguvarchatiram, Kancheepuram - 602 106, Tamilnadu, India CIN : U74999TN2006PTC069356 Tel No. :044-3717 5555

IMPLEMENTATION OF SLAM BASED AUTONOMOUS NAVIGATION

A PROJECT REPORT

Submitted by

ABISHEK SAMUEL BABU (920417115002)

C.DEEPARAJ ANNAMALAI (920417115013)

V.S.DEV AJAY KUMAR (920417115014)

In partial fulfilment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution affiliated to Anna University, Chennai)

K .VELLAKULAM -625 701 (Near Virudhunagar)

MAY2021

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 “IMPLEMENTATION OF SLAM BASED AUTONOMOUS NAVIGATION” is the bonafide work of “ABISHEK SAMUEL BABU (920417115002), C.DEEPARAJ ANNAMALAI (920417115013) ,V.S.DEV AJAY KUMAR (920417115014)” who carried out the project work under my supervision.



SIGNATURE

Dr. K. KANNAN, M.E., M.E., Ph.D.,
HEAD OF THE DEPARTMENT,

Mechatronics Engineering,

Kamaraj College of Engineering and
Technology, Madurai – 625701.



SIGNATURE

Dr. K. KANNAN, M.E., M.E., Ph.D.,
SUPERVISOR,

Mechatronics Engineering,

Kamaraj College of Engineering and
Technology, Madurai – 625701.

Submitted for the Viva –Voce Examination held on 28.04.2021



INTERNAL EXAMINER



EXTERNAL EXAMINER



ROBOTOAI TECHNOLOGIES

466, GV RESIDENCY, SOWRIPALAYAM (PO), COIMBATORE 641028,
TAMILNADU, INDIA.

Date: 17-04-2021

To Whomsoever It May Concern

This is to certify,

Mr. DEEPARAJ ANNAMALAI C (REG NO : 920417115013)

Mr. V S DEV AJAY KUMAR (REG NO : 920417115014)

Mr. ABISHEK SAMUEL BABU (REG NO : 920417115002)

FINAL YEAR-MECHATRONICS ENGINEERING, KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY, has undergone project at our company during the period of 01/02/2021 to 10/04/2021. During this period of time, their performance and conduct was good.

Title of the Project : Implementation of SLAM based Autonomous Navigation

Yours Sincerely,

A handwritten signature in black ink, appearing to be 'S. S. S.', written over a light blue background.

ROBOTOAI TECHNOLOGIES
NO.466, GV Residency,
Masakalipalayam, Sowripalayam (Post),
Coimbatore-641028.

Contact:7639808033/7010669570
E-mail: contactus@robotoai.com
Website: www.robotoai.com

**AUTOMATIC BLOWDOWN SYSTEM FOR
REMOVING SCALES IN BOILER USING TDS
SENSOR**

PROJECT REPORT

Submitted by

AJMAL D (920417115005)

SARAN V J (920417115040)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS 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)

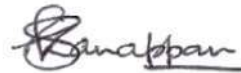
K.VELLAKULAM - 625 701 (Near Virudhunagar)

BONAFIDE CERTIFICATE

Certified that this project report “**AUTOMATIC BLOWDOWN SYSTEM FOR REMOVING SCALES IN BOILER USING TDS SENSOR**” is the bonafide work of “**AJMAL D (920417115005), SARAN V J (920417115040)**” who carried out the project work under my supervision.



SIGNATURE
Dr.K.KANNAN, M.E., M.E., Ph.D.,
Head of the Department,
Associate Professor,
Dept. of Mechatronic Engineering,
Kamaraj College of Engg & Tech,
K.Vellakulam, Madurai

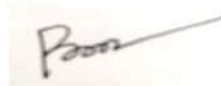


SIGNATURE
S.KANNAPPAN, M.E.,
SUPERVISOR , Assistant Professor,
Dept. of Mechatronics Engineering,
Kamaraj College of Engg & Tech,
K.Vellakulam, Madurai

Submitted for the Viva Voce Examination held on 28/04/2021



INTERNAL EXAMINER



EXTERNAL EXAMINER



A.1301. The Madurai District Cooperative Milk Producers' Union Limited,
Sivagangai Main Road, Sathamangalam, Madurai 625 020.

Date:31.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.V.J.Saran (Roll.No.17UMTR041), pursuing B.E Mechatronics at Kamaraj College of Engineering &Technology, Madurai has undergone Project Work in Engineering Wing from 18th February 2021 to 31th March 2021.

During the above period, his involvement in the subject & conduct was good.

A handwritten signature in black ink, followed by the date "31-3-2021" written below it. The signature is somewhat stylized and difficult to read.

Deputy Manager (office)





1301. The Madurai District Cooperative Milk
Producers' Union Limited,
Sivagangai Main Road, Sathamangalam, Madurai 625 020.

Date: 31.03.2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.D.Ajmal (Roll.No.17UMTR033), pursuing B.E Mechatronics at Kamaraj College of Engineering & Technology ,Madurai has undergone Project Work from 18th February 2021 to 31th March 2021.

During the above period, his involvement in the subject & conduct was good.

A handwritten signature in blue ink, followed by the date "31-3-2021" written in blue ink.

Deputy Manager (office)



**REMOTE CONTROLLED SOLAR POWERED
PESTICIDE SPRAYER**

A PROJECT REPORT

Submitted by

K. DINESH KUMAR

920417115016

N. SIVAHARISH

920417115047

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING



KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

K. VELLAKULLAM – 625 701 (NEAR VIRUDHUNAGAR)

APRIL 2021

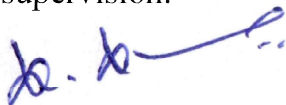
**KAMARAJ COLLEGE OF ENGINEERING AND
TECHNOLOGY**

(AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY,
CHENNAI)

K. VELLAKULLAM – 625 701 (NEAR VIRUDHUNAGAR)

BONAFIDE CERTIFICATE

Certified that this project report “**REMOTE CONTROLLED SOLAR
POWERED PESTICIDE SPRAYER**” is the bonafide work of “**K. DINESH
KUMAR, N. SIVAHARISH**” who carried out the project under my
supervision.



SIGNATURE

Dr. K. KANNAN M.E., M.E., Ph.D.,

HEAD OF THE DEPARTMENT

Mechatronics Engineering

Kamaraj College of Engineering and
Technology (Autonomous)

Madurai - 625 701



SIGNATURE

Mr. ARUL KUMAR M.E.,

SUPERVISOR

Assistant professor of Mechatronics Engineering

Kamaraj College of Engineering and Technology
(Autonomous)

Madurai - 625 701



INTERNAL EXAMINER



EXTERNAL EXAMINER

Software:		
1	Delta PLC software – free ware and corresponding PLC programming software.	1
2	Open source SCADA software such as Free SCADA, Open SCADA, Indigo SCADA CodeSys Open source for PLC programming and interfacing with real time PLC.	1

ME8682

DESIGN AND FABRICATION PROJECT

L T P C
0 0 4 2

OBJECTIVE:

- The main objective is to give an opportunity to the student to get hands on training in the fabrication of one or more components of a complete working model, which is designed by them.

GUIDELINE FOR REVIEW AND EVALUATION

The students may be grouped into 2 to 4 and work under a project supervisor. The device/system/component(s) to be fabricated may be decided in consultation with the supervisor and if possible with an industry. A project report to be submitted by the group and the fabricated model, which will be reviewed and evaluated for internal assessment by a Committee constituted by the Head of the Department. At the end of the semester examination 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 : 60 PERIODS

OUTCOMES:

Upon the completion of this course the students will be able to

- CO1 design and Fabricate the machine element or the mechanical product.
- CO2 demonstrate the working model of the machine element or the mechanical product.

ME8691

COMPUTER AIDED DESIGN AND MANUFACTURING

L T P C
3 0 0 3

OBJECTIVES:

- To provide an overview of how computers are being used in mechanical component design
- To understand the application of computers in various aspects of Manufacturing viz., Design, Proper planning, Manufacturing cost, Layout & Material Handling system.

UNIT I INTRODUCTION

9

Product cycle- Design process- sequential and concurrent engineering- Computer aided design – CAD system architecture- Computer graphics – co-ordinate systems- 2D and 3D transformations- homogeneous coordinates - Line drawing -Clipping- viewing transformation-Brief introduction to CAD and CAM – Manufacturing Planning, Manufacturing control- Introduction to CAD/CAM –CAD/CAM concepts —Types of production - Manufacturing models and Metrics – Mathematical models of Production Performance

CIRCULAR
ME-8682 - DESIGN AND FABRICATION PROJECT

The third review of ME8682 - Design and Fabrication Project for III-year B.E. Mechatronics Engineering students is scheduled on **17.05.2021** through **online (From 01.30 P.M to 4.00 P.M)**. All the students are informed to discuss with their respective guides and prepare the presentation for the review. The slides must be neatly prepared as follows.

Slide 1: Title of the Project with Students University reg., Guide Name & Designation

Slide 2: Objective of the Project

Slide 3: Deliverables/Outcomes

Slide 4: Problem Definition

Slide 5 & 6: Literature Review

Slide 7: Proposed Methodology

Slide 8: Design Calculation

Slide 9: Circuit Diagram

Slide 10: Simulation

Slide 11: Hardware Setup (Demonstration)

Slide 12: References

Slide 13: Conference Participation certificate for all team members and Published Manuscript.

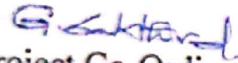
Meeting link: <https://teams.microsoft.com/l/meetup-join/19%3a9ffc075892c94c3381e373c5664b3a67%40thread.tacv2/1620024292540?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%22f315c2d0-f0e0-4d1f-9b8a-410ec1a4cb75%22%7d>

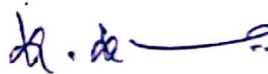
Each batch will be given 10 Minutes for presentation and 5 Minutes for discussion.

Each batch should submit the soft copy of the slides duly signed by their guide at the time of presentation without fail.

Register No	Roll No	Name of the Student	Batch No	Supervisor Name	Title	Time
920418115003	18UMTR002	ARULMUTHURAM.H	5601	Mr.G.sakthivel	Design & Fabrication of Core Plate Assembly Robot	1.30-1.45PM
920418115012	18UMTR003	KARTHICKRAJ.M				
920418115007	18UMTR030	DIYANESH.D				
920418115010	18UMTR035	JAYA SURYA.G				
920418115005	18UMTR004	DHANASEKARAN.V	5602	Mr.S.Wesley Moses Samdoss	Design and Fabrication of Robotic Hand	1.46-2.00PM
920418115022	18UMTR006	ROHIND.A.K				
920418115024	18UMTR008	SANTHOSH.P				
920418115002	18UMTR023	ANAND.L	5603	Dr.K.Kannan	Design and Fabrication of Segway Transporter	2.01-2.15PM
920418115028	18UMTR005	SIVAKUMAR.T				
920418115020	18UMTR007	RAMESH PANDIAN.A				
920418115033	18UMTR015	THANGA MANIKANDAN.M				
920418115009	18UMTR020	HARSHINI.T	5604	Mr.S.Wesley Moses Samdoss	Design and Fabrication of Vision Based Autonomous Car	2.16-2.30PM
920418115032	18UMTR010	TAMILSELVAN.V				
920418115029	18UMTR025	SIVARAJ.R				
920418115027	18UMTR026	P.SIVA	5605	Dr.K.Kannan	Design and Fabrication of Voice controlled multipurpose wheelchair	2.31-2.45PM
920418115011	18UMTR033	JOY SEBASTIN.S				
920418115031	18UMTR013	SYLESH KARTHIK.M				
920418115001	18UMTR019	ABISHEK SAM RAJ.J				
920418115004	18UMTR028	CHANDRU.M				
920418115036	18UMTR034	VISHNU PRASATH.M.S				

920418115501	17UMTR039	ALDRIN JERO PAUL A	5606	Mr.A.Ganesan	Design and Fabrication of Racing Kart	2.46-3.00PM
920418115014	18UMTR014	MOHAMMED AFRID.S				
920418115006	18UMTR016	DHINESH KUMAR M				
920418115015	18UMTR021	NAGARAJESH P				
920418115013	18UMTR009	MARIKANNAN A	5607	Mr.P.Balasundar	Design and Fabrication of E.Bike	3.01-3.15PM
920418115025	18UMTR022	SARAVANAKUMAR.P				
920418115021	18UMTR024	RISHIKESH B				
920418115008	18UMTR029	GOKUL SARAVANAN.R	5608	Mr.S.Kannappan	Design and Fabrication of Theo Jansen linkage mechanism Bot	3.16-3.30PM
920418115016	18UMTR001	PRINCE YONA R.L.C				
920418115035	18UMTR032	VISHNU KUMAR.P				
920418115018	18UMTR011	RAHINIG	5609	Mr.A.Arulkumar	Design and Fabrication of e-Vehicle battery SoC Meter	3.31-3.45PM
920418115023	18UMTR012	ROHINIG				


Project Co-Ordinator


HoD/MTRE

DESIGN AND FABRICATION OF CORE PLATE ASSEMBLY SCARA ROBOT

A PROJECT REPORT

Submitted by

H.Arul muthu ram (920418115003)

D.Diyanesh (920418115007)

G.Jaya surya (920418115010)

M.Karthick raj (920418115012)

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

MECHATRONICS ENGINEERING

DEPARTMENT OF MECHATRONICS ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.VELLAKULLAM-625 701(Near Virudhunagar)

JUNE 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 the project report “**DESIGN AND FABRICATION OF CORE PLATE ASSEMBLY SCARA ROBOT**” is the bonafide work of “ H.Arul muthu ram (920418115003), D.Diyanesh (920418115007), G.Jaya surya (920418115010), M.Karthick raj (920418115012) ” who carried out the project work under my supervision.



SIGNATURE

Dr. K. KANNAN.,

HEAD OF DEPARTMENT,

Associate Professor,

Dept, of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K.Vellakulam, Madurai



SIGNATURE

Mr. G.Sakthivel.,M.E

SUPERVISOR,

Assistant Professor,

Dept, of Mechatronics Engineering,

Kamaraj College of Engg & Tech,

K.Vellakulam, Madurai

Submitted for the Viva-Voce Examination held on 10/06/2021



INTERNAL EXAMINER



EXTERNAL EXAMINER

DESIGN AND FABRICATION OF ROBOTIC HAND

A PROJECT REPORT

Submitted by

ANAND L (920418115002)

DHANASEKARAN V (920418115005)

ROHIND A K (920418115022)

SANTHOSH P (920418115024)

In partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

IN



MECHATRONICS ENGINEERING



DEPARTMENT OF MECHATRONICS ENGINEERING

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution affiliated to Anna University, Chennai)

K. VELLAKULAM -625 701 (Near Virudhunagar)

MAY 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 “**DESIGN AND FABRICATION OF ROBOTIC HAND**” is the bonafide work of “**ANAND L (920418115002) DHANASEKARAN V (920418115005) ROHIND A K (920418115022) SANTHOSH P (920418115024)**” who carried out the project work under my supervision.



SIGNATURE

Dr. K. KANNAN, M.E., M.E., Ph.D.,
HEAD OF THE DEPARTMENT,
Associate Professor,
Dept.of Mechatronics Engineering,
Kamaraj College of Engg and Tech.,
Madurai – 625701.



SIGNATURE

Mr.S. WESLEY MOSES SAMDOSS, ME.,(Ph.D.)
SUPERVISOR,
Assistant Professor,
Dept.of Mechatronics Engineering,
Kamaraj College of Engg and Tech.,
Madurai – 625701.

The project report submitted for the viva voce held on...10/06/2021.....



INTERNAL EXAMINER



EXTERNAL EXAMINER

DESIGN AND FABRICATION OF SEGWAY

A PROJECT REPORT

Submitted by

HARSHINI. T (920418115009)

RAMESH PANDIAN. A (920418115020)

SIVAKUMAR. T (920418115028)

THANGAMANIKANDAN. M (920418115033)

In partial fulfilment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution affiliated to Anna University, Chennai)

K .VELLAKULAM -625 701 (Near Virudhunagar)

MAY 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 “**DESIGN AND FABRICATION OF SEGWAY**” is the bonafide work of “ **HARSHINI. T (920417115009) RAMESH PANDIAN. A (920417115020) SIVAKUMAR. T (920418115028) THANGAMANIKANDAN. M (920418115033)** ” who carried out the project work under my supervision.



SIGNATURE

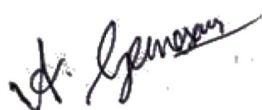
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The Project Report Submitted for the Viva voce held on 10/06/2021.



INTERNAL EXAMINER



EXTERNAL EXAMINER

DESIGN AND FABRICATION OF VISION BASED AUTONOMOUS CAR

PROJECT REPORT

Submitted by

JOY SEBASTIN S

(920417115011)

SIVA P

(920418115027)

SIVARAJ R

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TAMILSELVAN V

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In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHATRONICS ENGINEERING



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INTERNAL EXAMINER



EXTERNAL EXAMINER

**DESIGN AND SIMULATION OF
VOICE CONTROLLED MULTIPURPOSE WHEELCHAIR**

A PROJECT REPORT

Submitted by

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CHANDRU M : (920418115004)

SYLESH KARTHIK M : (920418115031)

VISHNU PRASATH M S : (920418115036)

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Certified that this project report “**DESIGN AND SIMULATION OF VOICE CONTROLLED MULTIPURPOSE WHEELCHAIR**” is the bonfire work of “**ABISHEK SAMRAJ J(920417115001) CHANDRU M (920417115004) SYLESH KARTHIK M (920418115031) VISHNU PRASATH M S (920418115036)**” who carried out the project work under my supervision.



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INTERNAL EXAMINER



EXTERNAL EXAMINER

DESIGN AND FABRICATION OF GO KART

A PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

DESIGN AND FABRICATION OF E-BIKE

A PROJECT REPORT

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B. RISHIKESH (920418115021)
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INTERNAL EXAMINER



EXTERNAL EXAMINER

DESIGN AND FABRICATION OF THEO JANSEN LINKAGE MECHANISM BOT

PROJECT REPORT

Submitted by

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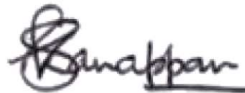
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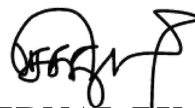
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INTERNAL EXAMINER



EXTERNAL EXAMINER

**DESIGN AND FABRICATION OF E-VEHICLE BATTERY
MANAGEMENT SYSTEM**

A PROJECT REPORT

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In partial fulfillment for the award of the degree

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INTERNAL EXAMINER



EXTERNAL EXAMINER