Criteria	Criteria 2- Teaching- Learning and Evaluation
Key Indicator	2.3 Teaching- Learning Process
Metric	2.3.1 Student centric methods, such as Collaborative Project Work used for problem solving methodologies

COLLABORATIVE PROJECT WORK

The students of SMVITM engage in project work during their 8th semester, while 6th-semester students undertake mini projects. These projects are typically team-based activities that enable students to apply theoretical knowledge gained in their coursework to real-world scenarios. Collaborating with peers helps students develop teamwork skills, learn effective communication, and appreciate diverse perspectives. The problem-solving approach inherent in project work enhances their critical thinking abilities.

Student projects provide a rich learning experience that extends beyond traditional classroom lectures. Each year, the institute conducts a project exhibition where students can showcase their projects, exchange knowledge, and inspire juniors to take up projects in the new era. This exhibition serves as a platform for students to demonstrate their innovation and creativity while fostering a culture of continuous learning and improvement within the institute.

This document reveals the process conducted by the institute to enhancing problem solving skill through collaborative project work.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NBA | Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
SMVITM

Prof. Dr. Thirumaleshwara Bhat
PRINCIPAL

14 June 2023
Ref No.2023/PRIN/42

Circular

Mini Project Exhibition for I, II & III year for the registered students will be held on 24th June 2023. Those who have already registered for the Exhibition and competition are requested to confirm their participation in the google form which will be shared through Email.

FIVE best projects will be awarded with a cash prize. The students who are exhibiting their work are entitled to get a certificate of participation.

For more details, students are requested to contact the co-curricular coordinator.

Dr.Renita Sharon Monis,
Assistant Professor(Sr)
Department of Mathematics

Principal

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Copy to: 1. HODs/ Section Heads/co-curricular coordinator/Trust office Notice Board
2. To be read in Classrooms

Mini – Project Circular

Invitation - "Technical Project Ideation" - Mini Project Competition/Exhibition 24June 2023

External Inbox ×

Prof. Dr. Thirumaleshwara Bhat <principal@sode-edu.in> Fri, Jun 23, 2023, 3:27 PM

to Ganesh, HOD, Lolita, Ravindra, HoD, HoD, Soumya, HoD, Dr.C, HOD, Sudarshan, RESEARCH, Quality, Soumya, Shrinivasa, Sahana, Savitha, Deepak, Sadananda, Sharath, Rukmin

Dear All

The Mini Project Competition/Exhibition for I/II/III year students will be held on 24 June 2023 at 9.00am to 12.30pm in the institute premises. The inauguration of the project exhibition will be held at 9.00am near Physics Lab. (Admin Block Basement). All are cordially invited.
Kindly visit the venue and encourage the participation and work carried out by the students.

The soft copy of the invitation is attached.

With Thanks and Regards

Prof. Dr. Thirumaleshwara Bhat
Principal
Shri Madhwa Vadiraja Institute of Technology and Management
Bantakal - 574 115, Udupi District
Karnataka State, INDIA
Tel: 7483031199/ 7483031200
Mobile: 9611615001
Mobile: +91 94493 30555
URL: www.sode-edu.in

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)

Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi

Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka

Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.

SMVITM

TECHNICAL PROJECT IDEATION

MINI PROJECT COMPETITION/EXHIBITION

SLOT NUMBERS & VENUE-24TH JUNE 2023

TEAM I-JUDGES DR. GURUPRASAD DR.BHARATH			
SLOT NO.	**STUDENT NAMES (USN)**	**PROJECT NAME**	**VENUE**
F1	AMRITHA U R-4MW22AD006-AIDS PANCHAMI PAI-4MW22AD030-AIDS SHREEPRIYA-4MW22AD051-AIDS VISHRUTHA-4MW22AD061-AIDS	FOOD DELIVERY SERVICE WEBSITE(PROTOTYPE) (FRONT-END ONLY)	CHEMISTRY LAB
F 2	SUMEDH NAVDA-4MW22CS167 SATVIK S BHAT -4MW22CS139 VISMAY M SHETTIGAR 4MW22CS186 ULLAS ACHARYA-4MW22CS174	FACE RECOGNITION USING OPEN CV	CHEMISTRY LAB
F3	KARTHIK NAYAK-4WM22CS073 SHASHWATH PAI- 4MW22CS088 ADISH POOJARY-4MW22CS004 JNANESH PALAN-4MW22CS067	SMART MEDICINE BOX	CHEMISTRY LAB
F4	ADITYA.V.KAMATH- 4MW22CS010 DANIELRODRIGUES-4MW22CS045 ANEESH.R.RAO-4MW22CS022 AKSHAYKUMAR-4MW22CS015	SMART BLIND WALKING STICK	CHEMISTRY LAB
F5	NIREEKSHA- 4MW22AD028-AIDS DEVIKTHA-4MW22CS052-CSE	FLAME SENSOR	CHEMISTRY LAB

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

	NAVYA-4MW22AD026-AIDS VAISHNAVI-4ME22EC106-ECE		
F6	MANASA POOJARI-4MW22ME007 SWARNA-WMW22EC100 VAISHNAVI-GSEC RAKHI-F SEC	PIR SENSOR	CHEMISTRY LAB
	SECOND YEAR		
S1	SOUJANYA(4MW21CS101) VAIBHAVLAXMI K MORAB(4MW21EC074) RAŞHMITHA B RAMESH (4MW21CS077) THARUN S MOOLYA (4MW21CS109)	FINGERPRINT DOOR LOCK	CHEMISTRY LAB
S2	PREONA DSOUZA (4MW21CS072) RACHANA P(4MW21CS073) SAVI HS(4MW21CS089) TRUPTI R ACHARYA (4MW21CS110)	VISUALISING STOCKS	CHEMISTRY LAB
S3	SATHWIK-4MW21CS086-CSE, SRIVATHSA S TANTRY-4MW21CS102-CSE, SAURABH-4MW21CS088-CSE, ANUSWAR-4MW22CS401-CSE	EHF SOS SYSTEM	CHEMISTRY LAB
S4	K SUDEEPA HEBBAR- 4MW21EC023- KIRAN- 4MW21EC028- ECE NITHIN WAGLE- 4MW21EC037- ECE AKSHAY V PRABHU- 4MW21EC008-	ARDUINO CAR PARKING SYSTEM	CHEMISTRY LAB
S5	CHETHAN - 4MW21CS018 -CSE CLATON ROBERT DSOUZA -4MW21CS019-CSE NAZEEFA RAJAKUMAR PATIL-4MW21CS055-CSE DEVADIGA TRUPTI	READY RENTALS	CHEMISTRY LAB

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

	UDAY-4MW21CS023- CSE		
S6	SINCHANA A R - 4MW21AI053 - AI &ML SAMEEKSHA NAYAK - 4MW21AI041 - AI &ML ANUSHREE - 4MW21AI062 - AI & ML JITHIL FERNANDES - 4MW21CS035 - CSE	PERSONAL ASSISTANT	CHEMISTRY LAB
S7	DHANYA (4MW21AI014) DHANYA KINI B(4MW21AI015) CHAITHRA 4MW21AI010 SHREYA S. 4MW21AI052	COIN SORTING AND COUNTING MACHINE	CHEMISTRY LAB
S8	SAINATH(4MW21AD047) TUSHAR(4MW21AD059) NARASIMHA(4MW21AD060)	VRTR	CHEMISTRY LAB
S9	RITIKA-4MW21EC051-ECE VEDA-4MW21EC078-ECE VINEETHA NAYAK-4MW21EC081-ECE	PROJECT	CHEMISTRY LAB
S10	K SATHVIK ACHARYA - 4MW21CV003 PARIKSHITH NAYAK - 4MW21CV006 VEERASEKHARA G - 4MW22CV401	ADVANCED TECHNOLOGY & ROAD SAFETY EQUIPMENTS	CHEMISTRY LAB

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
SMVITM

Activity Request form

Academic Year	2022-23		
Department/Section/ Committee/Cell	Co-curricular & ISTE		
Name of the Activity	Mini Project Exhibition		
Target Audience	Engineering Students of I, II & III Year		
Activity Date(s)	24-06-2023	Time	9.15 am-12.30pm
Venue	LAB-ADMIN BLOCK, EC BLOCK		
Resource Person	-		

Expected expenditure		
S. No.	Description	Amount
1.	Prizes for event.	7,500
2.	Certificates for participants	~~2,500~~ 1320
3.	Food coupons for judges and Volunteers	~~1,000~~ 560
	Total	

(Add rows if required)

Source of fund (Sponsorship/Registration fee)		
S. No.	Description	Amount
	ISTE-STUDENT CHAPTER	11,000- 9380
	Total	

(Add rows if required)

Financial support required from the Institute	-

Dr. Renita Sharon Monis **Name of the Coordinator**	12/6/2023 **Signature with date**
Chetan R. Name **Signature of ISTE coordinator**	13/6/23 **Signature with date**

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Remarks by IQAC

May be conducted

13/6/23

Signature

Remarks by Principal

Permitted

16-6-2023

Signature

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY & MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NBA | Accredited by NAAC with 'A' Grade | Affiliated to VTU, Belagavi
Vishwothama Nagar, Bantakal, Udupi – 574 115, Karnataka, India
Website: www.sode-edu.in | Mobile: +91 7483031199

SMVITM

Seeking the divine blessings from

H.H. SHRI VISHWAVALLABHA THREERTHA SWAMIJI

(Shri Sode Vadiraja Mutt, Udupi)

CO CURRICULAR COMMITTEE IN ASSOCIATION WITH HOBBY PROJECT CLUB AND ISTE

Cordially invite you to the

TECHNICAL PROJECT IDEATION

Mini-Project Competition/Exhibition
(For First/Second/Third Year Students)

on

24th June 2023 at 09:00 am to 12:30 pm

Venue: Physics & Chemistry lab (Admin block)

and EC Block (Basic Electrical & DSP lab)

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NBA | Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
SMVITM

Activity Report

Academic Year	2022 - 23
Name of the Program	Mini Project Exhibition
Date	24 June 2023
Target Audience	Students of First year, second year and Third year
Resource Person	----
Number of Participants	I YEAR-6,II YEAR-38,III YEAR-15 (Total Participants-235)

Detailed report on the activity:

Co-curricular committee in association with ISTE student chapter of SMVITM and Hobby Project Club, conducted Mini Project Exhibition in the institute premises. Experts nominated a total of 3 student projects as Best Projects and three projects as consolation Prizes. The I prize was 3,000 and II prize was 2,000 cash and III prize was 1,000 .Prizes will be distributed on 01 July 2023 during Cyber Security Workshop.

The principal Dr. Thirumaleshwara Bhat inaugurated the MiniProject exhibition and addressed the gathering and motivated students with encouraging words. Also, he asked the students to improvise their mini project into a dream project. Vice Principal, Dean QA Dr. Sudarshan Rao K and ISTE coordinator were present during the inauguration and also interacted with the students.

The Mini project exhibition was held at Physics labs, Chemistry lab and Basic Electrical Lab with a total 59 project teams exhibiting their project work. Projects based on various technologies such as IOT, Block Chain, Artificial Intelligence, Machine Learning, E-Commerce, Agriculture related was showcased by students. Various application oriented Machine learning based software projects and embedded system based models were showcased by the students.

Dr Bharti Panjwani, Associate Professor from Department of Computer Science Engineering ,Mr Arun Upadhyaya, Assistant Professor frc Department of Electronics & communication Engineering ,Dr.Guruprasad, HOD the department of Electronics and Communication Engineering ,Dr.Sadananda L, Associate Professor from the department of Computer Science Engineering, Dr. Bharath Bhat (Assistant Professor, Department of Mechanical Engineering), Mr. Ganesh Shetty, Assistant Professor from Department of Electronics & Communication Engineering, Mr. Roshan Kotian, Assistant Professor from Department of Civil Engineering and Dr Soumya J Bhat, Associate Professor from Department of Computer Science & Engineering interacted with all the teams and evaluated the projects. Students of 2nd and 3rd year visited the exhibition and got inputs which will help them in developing projects in future.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Judges details of Mini – project 24th June 2023

Judges Name	Department
Dr. Bharti Panjiwani	CSE
Dr. Sadanand L	CSE
Dr. Guru Prasad	ECE
Mr. Arun Upadhyaya	ECE
Mr. Ganesh Shetty	ECE
Mr. Roshan Kotian	CVE
Dr. Bharath Bhat	ME

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Results of Mini Project Exhibition:

PLACE	PROJECT TITLE	STUDENTS NAME (USN)
I	IOT BASED SMART CLASSROOM AND HOME AUTOMATION	1.PRASANNA SHET-4MW20EC040 2.PRATHAM-4MW20EC042 3.ANKITHA SHET-4MW20EC011 4.RAHUL-4MW20EC045
II	ECO-TECH	1.AKSHATA MURALIDHARA BAILOOR - 4MW21EC007 2.DHANUSH DEVADAS SHASTHRI - 4MW21EC018
III	MEDCAB	1. PRATHVIRAJ - 4MW21CS071 2. VIKRAM BHASKAR POOJARY-4MW21CS067 3. POOJA -4MW21CS065 4. PANCHAMI HEBBAR -4MW21CS063
CONSOLATION PRIZES		
IV	CITY+	1.KATHYAYINI KAMATH- 4MW21CS037 2.NISHITHA B RAO-4MW21CS059 3.DINESH BHAT- 4MW21CS025 4.PRATHAM L KAMATH-4MW21AD038
V	COCONUT DEHUSKING MACHINE	1.KARTHIK R MOOLYA-4MW20ME005 2.ANKITH SUVARNA-4MW20ME002 3.SUDEEP N R-4MW20ME011
VI	FACE RECOGNITION USING OPEN CV	1.SUMEDH NAVDA-4MW22CS167 2.SATVIK S BHAT -4MW22CS139 3. ISMAY M SHETTIGAR- 4MW22CS186 4.ULLAS ACHARYA-4MW22CS174

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Mini Project Exhibition
Date/Time: 24th June 2023, 10:00 AM
Location: Physics Lab
Latitude: 13.0254434 **Longitude:** 74.785142

Mini Project Exhibition
Date/Time: 24th June 2023, 10:00 AM
Location: Chemistry Lab
Latitude: 13.254434 **Longitude:** 17.785142

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Mini Project Exhibition
Date/Time: 24th June 2023, 10:00 AM
Location: Physics Lab
Latitude: 13.0254434 **Longitude:** 74.785142

Mini Project Exhibition
Date/Time: 24th June 2023, 10:00 AM
Location: Chemistry Lab
Latitude: 13.254434 **Longitude:** 17.785142

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
SMVITM
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

17-06-23

REF NO: 2023/HOD/EC/11

Dear Students,

Mini-project evaluation is scheduled on 24-06-2023. You have to give working demo of your project in front of examiner's panel.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

HOD,
ECE

Head
Dept of E&C Engg.
SMVITM, BANTAKAL - 574 115

To

1. Notice board
2. All faculties

Tel: +91 820 258 9182 / 9183 | Fax: +91 820 2589184 | Mobile: 7483031199 | E-Mail: info@sode-edu.in | Website: www.sode-edu.in

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
SMVITM
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

MINI PROJECT BATCHES

Batch. No	USN	NAME OF THE STUDENT	Section	GUIDE
	4MW20EC028	MANASA ACHARYA	A	Mr. Chethan R
	4MW20EC021	K PREETHIKA KAMATH	A	
	4MW20EC020	JEEVAN KUMAR	A	
1	4MW20EC030	MANISH	A	
	4MW20EC035	NIKHITHA SHETTY	A	Dr. Guru Prasad
	4MW20EC013	ANUSHA	A	
	4MW20EC002	ABHILASH NAIK	A	
2	4MW20EC037	PAVAN SHETTIGAR	B	
	4MW20EC011	ANKITHA ANNAPPA SHET	A	Mr.Sachin Prabhu K
	4MW20EC040	PRASANNA SHET	B	
	4MW20EC042	PRATHAM GANIGA	B	
3	4MW20EC045	RAHUL POOJARY	B	
	4MW20EC062	SUMANTH MUTALIK	B	Mrs. Yogeshwary B H
	4MW20EC048	RASHI	B	
	4MW20EC049	RIMSHA	B	
4	4MW20EC044	RAHAMATHUNNISA	B	
	4MW20EC046	RAKSHA NAYAK	B	Ms. Akshatha Rao L
	4MW20EC051	SANJANA RAO U S	B	
	4MW20EC056	SHREETA JAYAKAR SHETTY	B	
5	4MW20EC069	VINAYA S	B	
	4MW20EC014	ANUSHA A R	A	Mr. Vignesh Shenoy
	4MW20EC018	AUSTON ANTONY BARBOZA	A	
	4MW20EC026	M.DEEPAK ADIKARI	A	
6	4MW20EC036	NISHA JOSNA DSOUZA	B	
	4MW20EC027	MAHIMA V POOJARY	A	Ms. Shashikala R
	4MW20EC038	POOJA	A	
	4MW20EC022	KAZI MOHAMMED NABHAN	A	
7	4MW20EC043	PRATHVIRAJ	B	
	4MW20EC070	VIGHNESH NAIK	B	Ms.Vijayalatha Devadiga
	4MW20EC050	SAGAR ACHARYA	B	
	4MW20EC063	SUMANTH ACHARYA	B	
8	4MW20EC068	VIKAS	B	
	4MW20EC025	LLOYD WINSTON PINTO	A	Ms.Poojashree Hebbar
	4MW20EC004	ACHINTHYA	A	
	4MW20EC017	ATHMIKA	A	
9	4MW20EC016	ASHWINI	A	

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
SMVITM
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

MINI PROJECT BATCHES

10	4MW20EC060	SOURABH	B	Mr. Sandesh Kumar
	4MW20EC067	TANMAY KALKUR	B	
	4MW20EC061	SUMANTH POOJARY	B	
	4MW20EC066	SWASTHIK	B	
11	4MW20EC047	RAMYA DESHAPANDE	B	Mr. Ganesh S Shetty
	4MW20EC058	SHRINIDHI DEVADIGA	B	
	4MW20EC041	PRASHA	B	
	4MW20EC054	SHIVAPRASAD	B	
12	4MW20EC059	SOUMYA C SHETTY	B	Ms. Chandana
	4MW20EC055	SHRAVYA SM	B	
	4MW20EC065	SURAKSHA ACHARYA	B	
	4MW20EC057	SHREYA M TANTRY	B	
13	4MW20EC012	ANUSHA	A	Ms. Jayashree
	4MW20EC029	MANASA GANAPATI BHAT	A	
	4MW20EC031	MEDINI	A	
	4MW20EC033	SOWJANYA	A	
14	4MW20EC034	NAGARAJ	A	Ms. Lahari Vaidya
	4MW20EC003	ABISHEK	A	
	4MW20EC005	ADARSH	A	
	4MW21EC400	SAMPREETH	B	
15	4MW20EC024	KEERTHANA	A	Mr. Ranjith Bhat
	4MW20EC010	ANKITHA	A	
	4MW20EC019	HITHA	A	
	4MW20EC031	HARSHATA	A	
16	4MW20EC007	ADITHYA D NAYAK	A	Mr. Nagaraj Rao
	4MW20EC008	ADITHYA PRAKASH	A	
	4MW20EC015	ASHISH CHANDRAN	A	
	4MW20EC052	SANKALP R	B	

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA vADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)

Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi

Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka

Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.

SMVITM

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

MINI PROJECT Phase 2

	4MW20EC043	PRATHVIRAJ	B		
	4MW20EC070	VIGHNESH NAIK	B	**Mr. Sandesh Kumar**	Ms.Vijayalatha Devadiga
	4MW20EC050	SAGAR ACHARYA	B		
	4MW20EC063	SUMANTH ACHARYA	B		
EC08	4MW20EC068	VIKAS	B		
	4MW20EC025	LLOYD WINSTON PINTO	A	**Ms. Vijayalatha Devadiga**	Ms.Poojashree Hebbar
	4MW20EC004	ACHINTHYA	A		
	4MW20EC017	ATHMIKA	A		
EC09	4MW20EC016	ASHWINI	A		
	4MW20EC060	SOURABH	B	**Ms. Lahari Vaidhya**	Mr. Sandesh Kumar
	4MW20EC067	TANMAY KALKUR	B		
	4MW20EC061	SUMANTH POOJARY	B		
EC10	4MW20EC066	SWASTHIK	B		
	4MW20EC047	RAMYA DESHAPANDE	B	**Ms. Shashikala R**	Mr. Ganesh S Shetty
	4MW20EC058	SHRINIDHI DEVADIGA	B		
	4MW20EC041	PRASHA	B		
EC11	4MW20EC054	SHIVAPRASAD	B		
	4MW20EC059	SOUMYA C SHETTY	B	**Ms. Shashikala R**	Ms. Chandana
	4MW20EC055	SHRAVYA SM	B		
	4MW20EC065	SURAKSHA ACHARYA	B		
EC12	4MW20EC057	SHREYA M TANTRY	B		
EC13	4MW20EC012	ANUSHA	A	**Ms. Vijayalatha Devadiga**	Ms. Jayashree
	4MW20EC029	MANASA GANAPATI BHAT	A		
	4MW20EC031	MEDINI	A		

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.

SMVITM

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

MINI PROJECT Phase 2

Batch. No	USN	NAME OF THE STUDENT	Section	Examiner	GUIDE
	4MW20EC028	MANASA ACHARYA	A	**Mr. Ranjith Bhat**	Mr. Chethan R
	4MW20EC021	K PREETHIKA KAMATH	A		
	4MW20EC020	JEEVAN KUMAR	A		
EC01	4MW20EC030	MANISH	A		
	4MW20EC035	NIKHITHA SHETTY	A	**Mr. Sachin Prabhu K**	Dr. Guru Prasad
	4MW20EC013	ANUSHA	A		
	4MW20EC002	ABHILASH NAIK	A		
EC02	4MW20EC037	PAVAN SHETTIGAR	B		
	4MW20EC011	ANKITHA ANNAPPA SHET	A	**Ms. Jayashree**	Mr.Sachin Prabhu K
	4MW20EC040	PRASANNA SHET	B		
	4MW20EC042	PRATHAM GANIGA	B		
EC033	4MW20EC045	RAHUL POOJARY	B		
	4MW20EC062	SUMANTH MUTALIK	B	**Ms. Chandana**	Ms. Yogeshwary B H
	4MW20EC048	RASHI	B		
	4MW20EC049	RIMSHA	B		
EC04	4MW20EC044	RAHAMATHUNNISA	B		
	4MW20EC046	RAKSHA NAYAK	B	**Ms. Poojashree Hebbar**	Ms. Akshatha Rao L
	4MW20EC051	SANJANA RAO U S	B		
	4MW20EC056	SHREETA JAYAKAR SHETTY	B		
EC05	4MW20EC069	VINAYA S	B		
	4MW20EC014	ANUSHA A R	A	**Ms. Vijayalatha Devadiga**	Mr. Vignesh Shenoy
	4MW20EC018	AUSTON ANTONY BARBOZA	A		
	4MW20EC026	M.DEEPAK ADIKARI	A		
EC06	4MW20EC036	NISHA JOSNA DSOUZA	B		
EC07	4MW20EC027	MAHIMA V POOJARY	A	**Ms. Akshatha Rao L**	Ms. Shashikala R
	4MW20EC038	POOJA	A		
	4MW20EC022	KAZI MOHAMMED NABHAN	A		

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)

Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi

Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka

Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.

SMVITM

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

MINI PROJECT Phase 2

	4MW20EC033	SOWJANYA	A		
EC14	4MW20EC034	NAGARAJ	A	**Ms. Shashikala R**	Ms. Lahari Vaidya
	4MW20EC003	ABISHEK	A		
	4MW20EC005	ADARSH	A		
	4MW21EC400	SAMPREETH	B		
EC15	4MW20EC024	KEERTHANA	A	**Ms. Shashikala R**	Mr. Ranjith Bhat
	4MW20EC010	ANKITHA	A		
	4MW20EC019	HITHA	A		
	4MW20EC031	HARSHATA	A		
EC16	4MW20EC007	ADITHYA D NAYAK	A	**Ms. Vijayalatha Devadiga**	Mr. Nagaraj Rao
	4MW20EC008	ADITHYA PRAKASH	A		
	4MW20EC015	ASHISH CHANDRAN	A		
	4MW20EC052	SANKALP R	B		

Principal
SHRI MADHVA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SIGN LANGUAGE RECOGNITION SYSTEM

A MINI PROJECT REPORT

Submitted to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY Jnana Sangama, BELAGAVI- 590018

By

ANKITHA	USN:4MW20EC010
HITHA L SHETTY	USN:4MW20EC019
KEERTHANA	USN:4MW20EC024
MOOLYA HARSHATHA	USN:4MW20EC032

Under the guidance of

Mr Ranjith Bhat

Assistant Professor (Senior) , Dept. of Electronics & Communication Engineering

SMVITM

Department of Electronics & Communication Engineering

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Vishwothama Nagar, BANTAKAL – 574115, Udupi District

JUNE 2023

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust ®, Udupi)
Vishwothama Nagar, BANTAKAL – 574 115, Udupi District, Karnataka, INDIA

Department of Electronics & Communication Engineering

SMVITM

CERTIFICATE

Certified that the Mini Project Work titled '**SIGN LANGUAGE RECOGNITION SYSTEM**' is carried out by:

Ms. ANKITHA	USN: **4MW20EC010**
Ms. HITHA L SHETTY	USN: **4MW20EC019**
Ms. KEERTHANA	USN: **4MW20EC024**
Ms. HARSHATHA	USN: **4MW20EC032**

bonafide students of Shri Madhwa Vadiraja Institute of Technology and Management, in completion of **"Mini Project"** in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all the corrections / suggestions indicated during Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of Mini Project Work prescribed for the said degree.

15/7/23

Mr. RANJITH BHAT
Designation & Guide
Dept. of ECE
Signature with date

Dr. GURUPRASAD
In-charge Head
Dept. of ECE
Signature with date and seal

Head
Dept of E&C Engg.
SMVITM, BANTAKAL - 574 115

External Viva

Name of the Examiners:
1. P. K. Shetty
2. Nagaraja Rao

Signature with Date
18/07/23

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Acknowledgements

We express our deepest gratitude and respect to our guide **Mr. Ranjith Bhat ,Assistant Professor (Sr.)**, Department of Electronics and Communication Engineering, for his valuable guidance and encouragement while doing this project work.

We are indebted to Prof. Dr. Thirumaleshwara Bhat, Principal and Prof. Dr. Ganesh Aithal, Vice Principal, for their advice and suggestions at various stages of the work.

We extend our thanks to the Management of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi for providing good laboratory and library facilities. We also remain grateful to the co-operation and help rendered by the teaching and non-teaching staff of the Electronics and Communication Engineering Department. Lastly, we take this opportunity to offer our regards to all of those who have supported us directly or indirectly in the successful completion of this project work.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

Name of the Students

Ms. ANKITHA
Ms. HITHA L SHETTY
Ms. KEERTHANA
Ms. HARSHATHA

ABSTRACT

Sign language is one of the oldest and most natural form of language for communication, hence we have come up with a real time method using neural networks for finger spelling based American sign language. Automatic human gesture recognition from camera images is an interesting topic for developing vision. We propose a convolution neural network (CNN) method to recognize hand gestures of human actions from a image captured by camera. The purpose is to recognize hand gestures of human task activities from a camera image. The skin model, position of hand and orientation are applied to obtain the training and testing data for the CNN. The hand is first passed through a filter and after the filter is applied where the hand is passed through a classifier which predicts the class of the hand gestures. The hand position aims at translating and rotating the hand image to a neutral pose. Then the calibrated images are used to train the CNN.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Table of Contents

Chapter 1

INTRODUCTION

Sign Language is the most used to language used by deaf-dumb people to express their thoughts. The non-hearing-impaired person do not try to learn this sign language. This leads to miscommunication between deaf-dumb and normal people. But if we program a computer in such a way that it can translate sign language into text format then the difference between the normal people and the deaf community can be minimized. American Sign Language (ASL) is the natural and most commonly used sign language around the world. ASL uses hands to express signs. One of the main advantages of American Sign Language is less complexity and wider usage.

If the person does not have the knowledge of sign language, then the communication with hearing-impaired person becomes difficult. There is a need to develop a system that can generate text from ASL. We designed a real time Sign Language Recognition system and implemented it to recognize 26 gestures from the American Sign Language by hand gesture recognition system for text generation. The signs are captured by using mobile camera.

According to the World Federation of the Deaf, out of 7.7 billion people in the world, approximately 70 million people are deaf [16]. SL is like any other language, which is widely used for communicating with people with hearing loss. Approximately 300 SLs (Sign Language) are used by the deaf community all over the world. ASL is a gesturebased language. Today, there is not any international standard for SL, and thus to communicate with people across the globe, one has to learn the native SL [16]. Every region has its own SL interpretation. ASL has its own syntax and grammar just like any other natural sign language.

Chapter 5

CONCLUSION AND FUTURE WORK

As a result, the gap in communication between the deaf and mute and others who could not comprehend sign language is closed. Its utilization will expand if it is made portable. We can use the equipment more fluidly and quickly thanks to the increased speed and precision. It can be used in situations where emergency communication is crucial, such as hospitals and police stations. It will assist in building a better society.

Circular – Final Year Project Exhibition 12th May 2023

Invitation - Final Year Student Project Competition/Exhibition Inbox ×

Prof. Dr. Thirumaleshwara Bhat <principal@sode-edu.in> Thu, May 11, 2023, 2:50 PM

to Ganesh, HOD, Lolita, Ravindra, HoD, Sudarshan, Soumya, HoD, Dr.C, HOD, Sudarshan, RESEARCH, Quality, Sudhakar, Deepak, Placement, Satheesha, Sode, Physical, Vinayaka, ...

Dear All

The Project Competition/Exhibition for the final year students will be held on 12 May 2023 at 11.00am to 3.30pm in the institute premises

The farewell function of the 10th outgoing student batch is scheduled on 13 May 2023 at 3.30pm in the seminar Hall of Library Block. Please join the function and make it a memorable event. Photo Session for the final year students is arranged at 2.00pm. All the engineering department faculty members are requested to be present for the photo session.

All are cordially invited. The soft copy of the invitations is attached

With Thanks and Regards

Prof. Dr. Thirumaleshwara Bhat
Principal
Shri Madhwa Vadiraja Institute of Technology and Management
Bantakal - 574 115, Udupi District
Karnataka State, INDIA
Tel: 7483031199/ 7483031200
Mobile: 9611615001
Mobile: +91 94493 30555
URL: www.sode-edu.in

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY & MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NBA | Accredited by NAAC with 'A' Grade | Affiliated to VTU, Belagavi
Vishwothama Nagar, Bantakal, Udupi – 574 115, Karnataka, India
Website: www.sode-edu.in | Mobile: +91 7483031199

SMVITM

Seeking the divine blessings from

H.H. SHRI VISHWAVALLABHA THREERTHA SWAMIJI

(Shri Sode Vadiraja Mutt, Udupi)

CO CURRICULAR COMMITTEE IN ASSOCIATION WITH ISTE & IIC
on account of National Technology day

Cordially invite you to the

TECHNICAL PROJECT IDEATION

Final Year Students Project Competition/ Exhibition

on

12th May 2023, at 11:00 am to 04:00 pm
Venue: Respective Department Blocks

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.

SMVITM

Activity Request form

Academic Year	2022-23		
Department/Section/ Committee/Cell	Co-curricular		
Name of the Activity	Final Year Project Exhibition		
Target Audience	Final Year Engineering Students		
Activity Date(s)	12-05-2023	Time	11.00am-4.00pm
Venue	Respective Department Blocks		
Resource Person	-		

Expected expenditure		
S. No.	Description	Amount
1.	Prizes for event	20,000
2.	Certificates and other expenditure	5,000
	Total	25,000

(Add rows if required)

Source of fund (Sponsorship/Registration fee)		
S. No.	Description	Amount
1.	ISTE-STUDENT CHAPTER	25,000
	Total	25,000/-

(Add rows if required)

Financial support required from the Institute	-

Dr. Renita Sharon Maries **Name of the Coordinator**	03/05/2023 **Signature with date**
Chetan P **Signature of ISTE coordinator**	3/5/23 **Signature with date**

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Remarks by IQAC

May be conducted

Signature 3/5/23

Remarks by Principal

Proceed

3/5/2023
Signature

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Judges list of final year project exhibition 12th May 2023

Judges Name	Department
Mr. Roshan Kotian	Civil
Dr. Manjunath	Mechanical
Mr. Ganesh Shetty	ECE
Mr. Deepak Rao	CSE
Mr. Sudhir	Mechanical
Ms. Deepika B V	Civil
Ms. Rajashree Nambiar	ECE
Mr. Srinivas	CSE

Principal
SHRI MADHVA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NBA | Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
SMVITM

Activity Report

Academic Year	2022 - 2023
Name of the Program	Final Year Project Exhibition
Date	12 May 2023
Target Audience	Students of final year
Resource Person	-
Number of Participants	8 -ME, 30-CSE, 21-ECE, 7-CVE

Detailed report on the activity:

Co-curricular committee in association with ISTE student chapter and IIC of SMVITM, conducted Final Year Project Exhibition on account of National Technology Day in the institute premises. Experts nominated a total of 2 student projects as Best Projects from each department. The I prize was 3,000 and II prize was 2,000 cash was awarded at a farewell function on 13th May2023. Program was coordinated by cocurricular co-ordinator Dr. Renita Sharon Monis

Report of ME Projects:

8 projects of the final year from the Department of Mechanical Engineering were exhibited at the department ground floor. The live models of the project along with presentations and banners were exhibited enthusiastically by the students. 4 projects were design and fabrication based while the remaining 4 were research based in the areas of IC engines, utilization of solar power and Mg alloy processing. The judges Mr. Roshan Kotian Assistant Professor, Department of Civil Engineering and Dr. Manjunath, Assistant Professor (Sl. Grade), Department of Mechanical Engineering visited each of the projects and interacted with the students, as they highlighted the salient features of the projects including ideation, innovation, design, fabrication, testing and results obtained. The principal Dr. Thirumaleshwara Bhat, Dean QA Dr. Sudarshan Rao K also interacted with the students. The HOD and Department Project Coordinator, faculty and students of the department also took part in the project exhibition. HOD's, faculty and students of other departments also visited the project exhibition and interacted with the final year students.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Report of ECE Projects:

21 project teams from the Department of Electronics & Communication Engineering exhibited project ideation at the department laboratory first floor. Various application oriented projects in the field of IOT, solar energy, Machine learning, robotics and embedded system based models were showcased by the students. Mr.Ganesh Shetty., Assistant Professor (Sr.) from the department of Electronics & Communication Engineering and Mr. Deepak Rao, Assistant Professor(Sr.) from the department of Computer Science and Engineering interacted with the students of each project team and gave useful suggestions on their ideation, methods of implementation . They also analysed and evaluated the projects. The faculty and students of Electronics and Communication Engineering visited the project exhibition and interacted with the final year students.

Report of CVE Projects:

The Department of Civil Engineering has organized a Project Competition/Exhibition on 12th May 2023 at the Department premises. Total 07 student's Projects were displayed in the Civil Engineering Department. Out of them 03 projects were Sustainable construction practices/Societal related and the remaining were experimental and prototype.

Respected Principal, Dr. Thirumaleshwara Bhat Dean ,Dean QA Dr. Sudarshan Rao K also interacted with the students, students who were representing their Projects and also gave good suggestions to them.

Experts were : (1) Mr. Sudhir , Assistant Professor(Sr.), Department of Mechanical Engineering. Professor gave valuable inputs to students on the project and also analysed/Judged all the exhibited projects critically. (2) Mr. Madhusoodhan Rao (Assistant Professor, Civil Engineering Department) also analyzed/Judged , gave suggestions and motivated the students.

Dr.Deepika B V ,HOD, Civil Engineering Department, Mr. Sunil Haldankar, Departmental Project Coordinator and all Civil Engineering Department's faculties also encouraged students for their Project Poster.

Report of CSE Projects:

The final year Ideation/project exhibition was held at the CCC, CC3 and CC4 labs from Department of CSE with 30 project teams exhibiting their work. Students presented projects based on diverse technologies such as Deep Learning, Image Compression, IOT, Block Chain, Artificial Intelligence, Machine Learning, and E-Commerce. Ms. Rajashree Nambiar, Senior Assistant Professor from the Department of Electronics and Communication, and Mr. Shrinivasa, Senior Assistant Professor from the Department of Computer Science and Engineering, met with all of the teams and evaluated their projects. Third-year students visited the exhibition and received feedback that will help them build projects in the future.

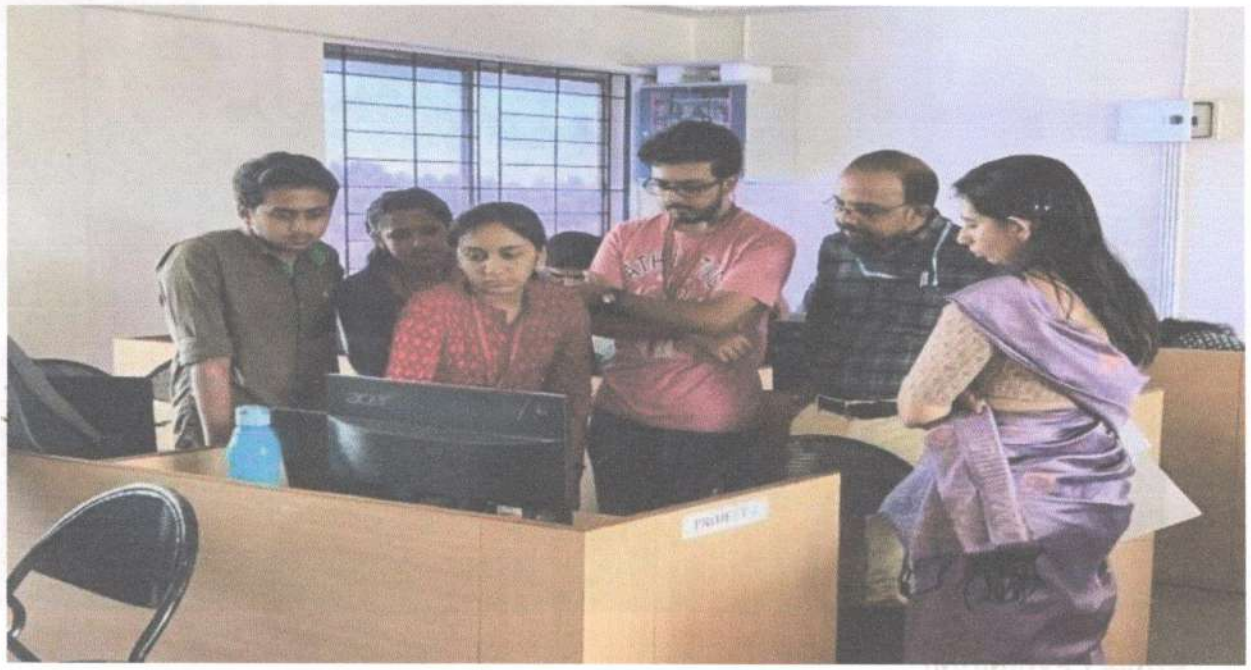
Dr. Soumya J Bhat, Ms. Savitha Shenoy ,Ms. Sahana Karanth, Ms. Sowmya S, and Ms. Sowmya N H, faculty members, visited the teams and provided views into how the projects might be enhanced for future enhancement.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

RESULTS OF FINAL YEAR PROJECT EXHIBITION

BRANCH	PLACE	PROJECT TITLE	STUDENTS NAME (USN)
CSE	I	GAME DEVELOPMENT USING UNITY	MANISH PRAKASH AKASH S KOTIAN ANANTHA KRISHNA RAMACHANDRA MANVITHA ANANTH NILEKANI
	II	LIPI-DARPANA:A DEGRADED HISTORICAL DOCUMENT BINARIZATION APPLICATION	ANIKETH SHENOY K ASHITH CHIRANTH BIBEK KUMAR PANDIT
ECE	I	DRY AND WET GARBAGE SEGREGATION & MONITORING	SUDEEP UJWAL U SHETTY WILSON NORONHA SUJAN
	II	AUTOMATIC ENERGY METER READER	AKSHAY PRATHEEKSHA RAKSHATH KUMAR RASHMITHA BHAT
ME	I	DESIGN & DEVELOPMENT OF LEAF PLATE MOLDING MACHINE FOR PRODUCING BIODEGRADABLE PLATES FROM WASTE LEAVES	CHANDAN NELLI M K PRATHIK AMBALPADY PRATHVIRAJ SHESHAGIRI VAIKUNTH PAI
	II	SOLAR POWERED GRASS TRIMMER WITHOUT BATTERY	KIRAN LIKHITH LOHITH PRASHANTH
CVE	I	FEASIBILITY OF CEMENTLESS INTERLOCK BLOCKS AS A GREEN PAVEMENT SYSTEMS: FUTURISTIC SUSTAINABLE CONSTRUCTION PRACTICES	SANDARSH CHAITHRA CHANDAN
	II	EVALUATION OF PERFORMANCE AND ENERGY SAVINGS POTENTIAL OF EARTH AIR TUNNEL SYSTEM INSIDE THE BUILDING AS SUSTAINABLE ALTERNATIVE	SINCHANA VINUTH CS VYBHAV S KOTIAN

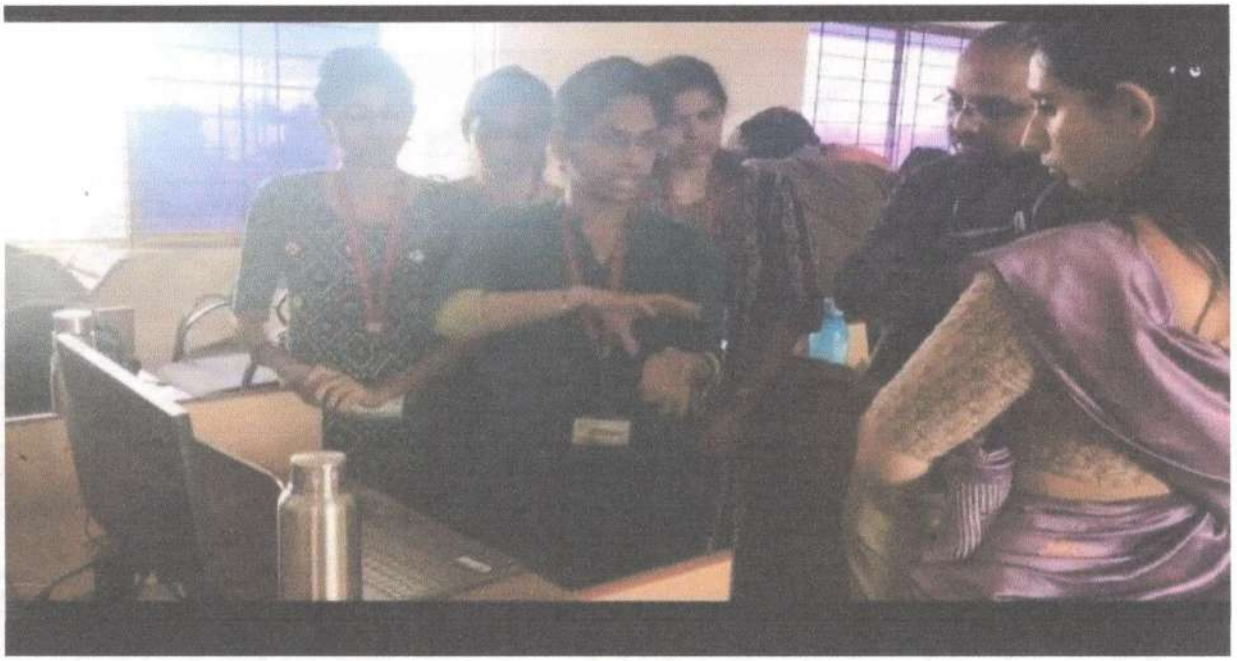
Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115



Project Exhibition
Date/Time: 12th May 2023, 02:30 PM
Location: CCC
Latitude: 13.254555 **Longitude:** 74.785065

Project Exhibition
Date/Time: 12th May 2023, 02:45 PM
Location: CCC
Latitude: 13.254555 **Longitude:** 74.785065

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115



Project Exhibition
Date/Time: 12th May 2023, 02:00 PM
Location: CC3
Latitude: 13.254629 **Longitude:** 74.785115

Project Exhibition
Date/Time: 12th May 2023, 02:15 PM
Location: CCC
Latitude: 13.254555 **Longitude:** 74.785065

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

PROJECT-INTERNSHIP CSE

Nov 10, 2022

Hello students

Please find the synopsis format and guide allocation list that are attached.

I kindly request everyone to submit their synopsis to their respective guide by November 12th, 2022.

The first phase of your project will be carried out on November 19th, 21st, and 22nd of 2022. Thank You.

PROJECT SYNOPSIS 2022-...
Word

GUIDE ALLOTMENT-2022-...
Excel

Add class comment...

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
Accredited by NBA | Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi
Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SMVITM

PROJECT PROPOSAL

PROJECT GROUP NO: 16 **ACADEMIC YEAR: 2022-23**

A. Proposed Title of the Project

DRIVER DROWSINESS DETECTION SYSTEM

B. Introduction

Road accidents caused by driver drowsiness are a significant problem worldwide. The National Highway Traffic Safety Administration (NHTSA) in the US estimates that fatigue-related accidents result in more than 150,000 crashes, 1,650 deaths, and 72,000 injuries each year. Similarly, in Europe, fatigue is considered a contributing factor in approximately 20% of accidents on highways. These figures underscore the need to develop and implement effective driver drowsiness detection systems to prevent such accidents and decrease the number of fatalities and injuries on the roads.

Driver drowsiness detection systems are intended to recognize the signs of driver tiredness and warn them to stop driving and rest to prevent accidents. These systems use a combination of sensors, cameras, and algorithms to monitor the driver's behavior, such as eye movements, head position, and steering patterns, to detect signs of drowsiness. Once the system detects drowsiness, it can alert the driver through visual, audible, or tactile signals, or even take control of the vehicle, such as slowing it down or bringing it to a stop.

C. Literature Review

[1] This paper gives a comprehensive assessment of recent studies on machine learning-based sleepiness detection systems. The authors analyzed various algorithms and techniques that have been used in developing such systems and evaluated their accuracy, effectiveness, and applicability in real world scenarios.

[2] This study proposes a drowsiness detection system that uses machine learning algorithms to analyze a driver's behavior, such as steering wheel movements and speed variations. The authors evaluated the performance of the system using a driving simulator and found that it was highly accurate in detecting drowsiness.

[3] This paper presents a machine learning-based drowsiness detection system that uses physiological signals, such as electroencephalogram (EEG) and electrocardiogram (ECG), to identify drowsiness in drivers. The authors tested the system on a group of volunteers and achieved high accuracy in detecting drowsiness.

D. Objectives

The objective of this project is to utilize Dlib toolkit's facial landmark detection feature to build a robust system to detect signs of drowsiness such as eye closure. The system will then ring an alarm to alert the driver of their eyes are closed.

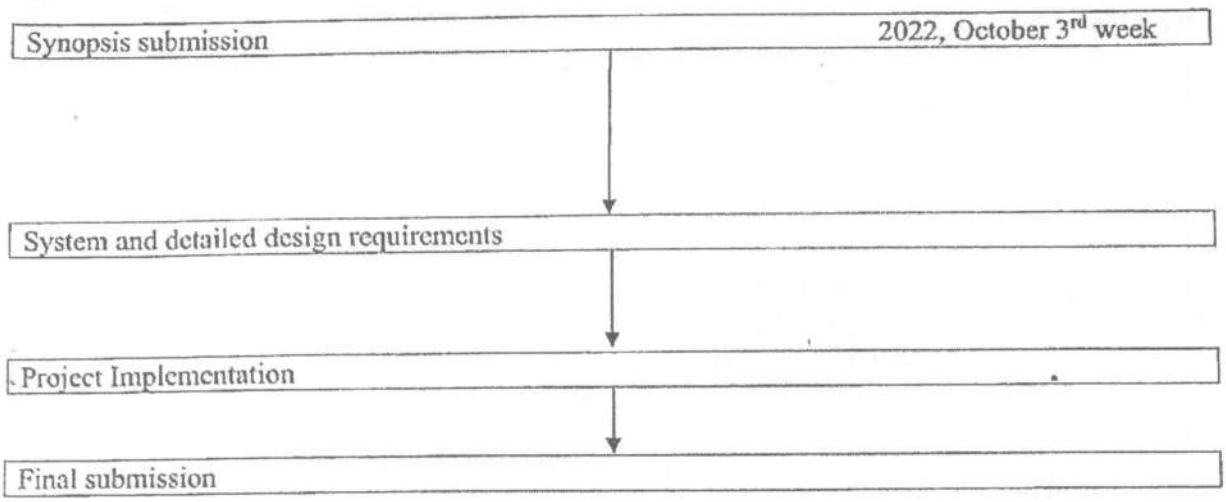
E. Workplace	Address of Other Institute / Industry (if any):
College / Other Institute / Industry	

F. Requirement Details

1. Hardware	Laptop with basic hardware , Webcam/Camera
2. Software	Windows, Visual studio code, python, libraries
3. Skill sets	Dlib toolkit's

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

I. Flowchart (Plan of Action)



J. Expected Outcome of the project

The suggested method for detecting driver tiredness made use of the Histogram of Oriented Gradients (HOG) based face detector and the pre-trained 68 facial landmark detector from the Dlib library.
The quantifiable parameter utilized to track the driver's level of sleepiness was the Eye Aspect Ratio (EAR). The use of Python and the Dlib library to create this system has proven to be a viable option for enhancing traffic safety. This system can detect the driver's drowsiness by tracking the facial landmarks and analyzing the changes in the eye aspect rat

K. Estimated cost	Source of Fund
Rs 3000	

L. References

1] Drowsiness Detection System using Machine Learning Techniques: A Review" by Mahjma, et al. (2021)

[2] Drowsiness Detection Based on Driver's Behavior using Machine Learning" by R. L. P. G. Silva, et al. (2019)

[3] Driver Drowsiness Detection using Machine Learning Techniques" by P. Shanmugavadivu, et al. (2020

M. Project Batch members

S.No.	USN	Name	Signature with date
1.	4MW19CS041	JELENA RIYA LEWIS	
2.	4MW19CS016	ANUSHA (SATHISH)	
3.	4MW19CS027	CHAITHRAKALA	
4.	4MW19CS032	DHATHRI TENDULKAR	

N. Accepted/Rejected: Accepted

O. Suggestions for implementation:

* Define the exact algorithm for the system

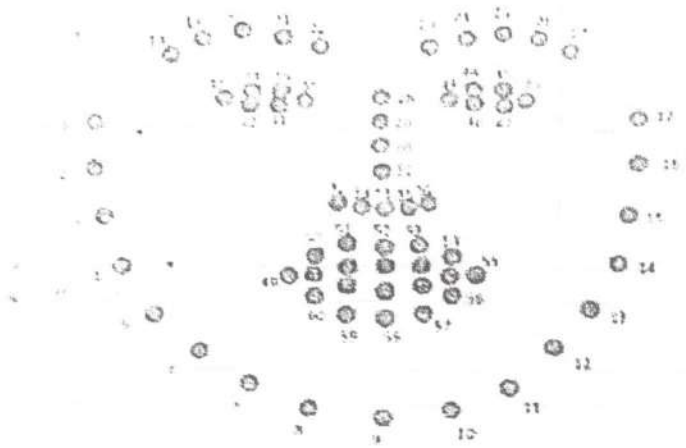
P. Guidance

Guide (s) allotted	Guide Name and Signature (s) with date
	SADHANANDA L. 30/11/22

Principal
SRIMADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL

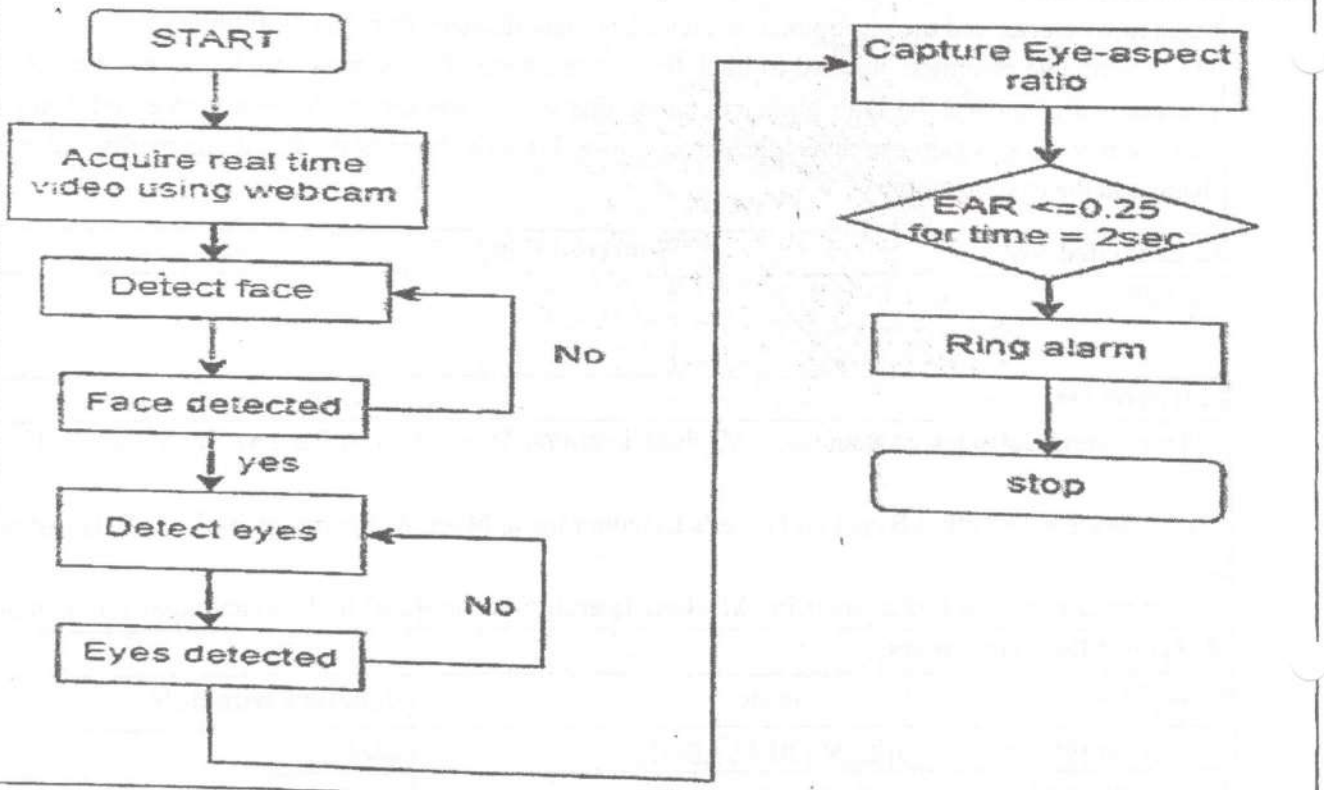
4. Others	

G. Figure(s)/Drawing(s)



Facial landmarks as depicted by dlib facial landmark predictor

H. Methodology



Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574115

1. Guide	SADANANDA L. 30/11/22

Principal
SHRI MADHVA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Q. Review Comments/Suggestions	Accept/Modify/Reject	Reviewer Name and Signature
Define the algorithm for drowsiness system.	Accepted (modify it first)	
well presented, few more Algorithms should be analysed	Accepted.	
Proposed method should be compared with existing method	Accepted with modification	SAHANA

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Shri Madhwa Vadiraja Institute of Technology and Management
Department of Computer Science and Engineering
Project Work: 2022 - 2023
Phase 1 Schedule

Slot No.	Project Group No.	Date & Time	Place	Guide/Committee Members
1	1, 4, 20, 21 30, 31	24/11/2022 @12PM onwards	CC4	Dr. SOWMYA J BHAT Ms. SAVITHA Ms. VIJETHA Mr. RANJAN
2	9,22,23 24,25	24/11/2022 @12PM onwards	CCC	Ms. RUKMINI BHAT Ms. SOUNDARYA Mr. RAGHAVENDRA
3	5, 6, 7 16, 17	25/11/2022 @12PM onwards	CCC	Mr. DEEPAK RAO M Mr. SADANANDA L Ms. SAHANA
4	8, 26, 27, 28, 29	25/11/2022 @12PM onwards	CC4	Mr. SHARATH Ms. CHAITHRA Ms. PREETHI
5	3, 10, 11 14, 15	26/11/2022 @12PM onwards	CC4	Ms. YASHASWINI JOGI Ms. SOWMYA S Ms. DHANYA SHENOY
6	12,13,18 19	26/11/2022 @12PM onwards	CCC	Ms. SOWMYA N H Ms. YASHASWINI A S

Signature of Project Co-ordinator

Signature of HOD

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Shri Madhwa Vadiraja Institute of Technology and Management
Department of Computer Science and Engineering
Project Work: 2022 - 2023
Phase 2 Schedule

Slot No.	Project Group No.	Date & Time	Place	Guide/Committee Members
1	1	29/12/2022 @12PM onwards	CC4	Dr. SOWMYA J BHAT Ms. SAVITHA Mr. SRINIVASA
2	2,12,13,18,19	29/12/2022 @12PM onwards	CC4	Mr. SRINIVASA Ms. SOWMYA N H Ms. YASHASWINI A S
3	3,10,11,14,15	29/12/2022 @12PM onwards	CCC	Ms. YASHASWINI JOGI Ms. SOWMYA S Ms. DHANYA SHENOY
4	4,20,21,30,31	30/12/2022 @12PM onwards	CCC	Ms. SAVITHA Ms. VIJETHA Mr. RANJAN
5	5,6,7,16,17	30/12/2022 @12PM onwards	CC4	Mr. DEEPAK RAO M Mr. SADANANDA L Ms. SAHANA
6	8,26,27,28,29	31/12/2022 @9AM onwards	CC4	Mr. SHARATH Ms. CHAITHRA Ms. PREETHI
7	9,22,23,24,25	31/12/2022 @9AM onwards	CCC	Mr. RAGHAVENDRA Ms. SOUNDARYA Ms. RUKMINI BHAT

Signature of Project Co-ordinator

Signature of HOD

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Shri Madhwa Vadiraja Institute of Technology and Management
Department of Computer Science and Engineering

Project Work: 2022 - 2023

Phase 4 Schedule

Slot No.	Project Group No.	Date & Time	Place	Guide/Committee Members
1	1	19/04/2023 @9AM onwards	CC4	Dr. SOWMYA J BHAT Ms. SAVITHA Mr. SRINIVASA
2	2,12,13,18,19	19/04/2023 @9AM onwards	CC4	Mr. SRINIVASA Ms. SOWMYA N H Ms. YASHASWINI A S
3	3,10,11,14,15	19/04/2023 @9AM onwards	CCC	Ms. YASHASWINI JOGI Ms. SOWMYA S Ms. DHANYA SHENOY
4	4,20,21,30,31	19/04/2023 @9AM onwards	CCC	Ms. SAVITHA Ms. VIJETHA Mr. RANJAN
5	5,6,7,16,17	20/04/2023 @9AM onwards	CC4	Mr. DEEPAK RAO M Mr. SADANANDA L Ms. SAHANA
6	8,26,27,28,29	20/04/2023 @9AM onwards	CC4	Mr. SHARATH Ms. CHAITHRA Ms. PREETHI
7	9,22,23,24,25	20/04/2023 @9AM onwards	CCC	Mr. RAGHAVENDRA Ms. SOUNDARYA Ms. RUKMINI BHAT

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Shri Madhwa Vadiraja Institute of Technology and Management
Department of Computer Science and Engineering
Project Work: 2022 - 2023
Phase 5 Schedule

Slot No.	Project Group No.	Date & Time	Place	Guide/Committee Members
1	1	8/5/2023 @9AM onwards	CC4	Dr. SOWMYA J BHAT Ms. SAVITHA Mr. SRINIVASA
2	2,12,13,18,19	8/5/2023 @9AM onwards	CC4	Mr. SRINIVASA Ms. SOWMYA N H Ms. YASHASWINI A S
3	3,10,11,14,15	8/5/2023 @9AM onwards	CCC	Ms. YASHASWINI JOGI Ms. SOWMYA S Ms. DHANYA SHENOY
4	4,20,21,30,31	8/5/2023 @9AM onwards	CCC	Ms. SAVITHA Ms. VIJETHA Mr. RANJAN
5	5,6,7,16,17	9/5/2023 @9AM onwards	CC4	Mr. DEEPAK RAO M Mr. SADANANDA L Ms. SAHANA
6	8,26,27,28,29	9/5/2023 @9AM onwards	CC4	Mr. SHARATH Ms. CHAITHRA Ms. PREETHI
7	9,22,23,24,25	9/5/2023 @9AM onwards	CCC	Mr. RAGHAVENDRA Ms. SOUNDARYA Ms. RUKMINI BHAT

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

PUBLIC BUS TRACKING AND INFORMATION USING IoT

A PROJECT REPORT

Submitted to

Visvesvaraya Technological University

BELAGAVI - 590 018

by

Karthik H Amin
USN: 4MW19CS045

Keerthan K Karkera
USN:4MW19CS048

Manish Kumar HJ
USN:4MW19CS051

Pooja Shettigar
USN:4MW19CS064

Under the guidance of

Prof. Soumya J Bhat

Head of Department, Dept. of Computer Science and Engineering

Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, UDUPI

In partial fulfillment of the requirements for the award of the degree of

Bachelor of Engineering

SMVITM

Department of Computer Science and Engineering

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Vishwothama Nagar, BANTAKAL – 574 115, Udupi District

MAY 2023

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist.
BANTAKAL - 574 115

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust ®, Udupi)

Vishwothama Nagar, BANTAKAL – 574 115, Udupi District, Karnataka, INDIA

Department of Computer Science and Engineering

CERTIFICATE

Certified that the Project Work titled "**Public Bus Tracking and Information using IoT**" is carried out by **Mr. Karthik H Amin**, USN: **4MW19CS045**, **Mr. Keerthan K Karkera**, USN: **4MW19CS048**, **Mr. Manish Kumar HJ**, USN: **4MW19CS051**, **Miss. Pooja Shettigar**, USN: **4MW19CS064** a bonafide student of Shri Madhwa Vadiraja Institute of Technology and Management, in partial fulfillment for the award of the degree of **Bachelor of Engineering** in Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the year 2022-23. It is certified that all the corrections/ suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the said Degree.

23/5/23		23.5.2023
Dr. Soumya J Bhat	**Dr. Soumya J Bhat**	**Dr. Thirumaleshwara Bhat**
Project Guide	Head of the department	Principal
Dept. of CSE	Dept. of CSE	
	Dept. of Comp.Science & Engg SMVITM, BANTAKAL-574115	Vishwothama Nagar, Udupi Dist. BANTAKAL - 574 115

External Viva

Name of the Examiners:	**Signature with Date**
1. Sudarshan K	23/5/23
2. Savitha A Shetty	23/05/2023

Principal
SHRI MADHVA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

ACKNOWLEDGEMENT

It is our privilege to express sincerest regards to our project guide Dr. Soumya J Bhat, head of department, Dept. of CSE, SMVITM, Bantakal for helping us in successful completion of this project work.

We would also like to thank our project coordinators Dr. Sadananda L, Associate Professor. Dept. of CSE, SMVITM, Bantakal for helping us in successful completion of this project work.

We would like to thank Dr. Soumya J Bhat, HOD Dept. of Computer Science & Engineering for his inspiration during the completion of the project.

We would like to express our gratitude to Prof. Dr. Thirumaleshwara Bhat, Principal, SMVITM, Bantakal for extending his support.

We take this opportunity to express our deepest gratitude and appreciation to all those who helped us directly or indirectly towards the successful completion of this project.

We would like to thank our teaching and non-teaching staff, friends, who supported and encouraged us.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Karthik H Amin

Keerthan K Karkera

Manish Kumar HJ

Pooja Shettigar

ABSTRACT

Internet of Things (IoT) can be used to integrate communication, control and information processing across various transformation systems. Currently the tracking systems used in private bus or cab work based on the Global Positioning System (GPS) embedded in the smart phones of the driver which are specific to drivers, not the vehicle. An Intelligent Transport System (ITS) is proposed to reduce the barriers for public transport usage and create a positive impact on the bus journey. It uses ARDUINO UNO, IR Sensor and GPS Module to provide prior information about current location, next location of bus and crowd level inside the bus. The existing system uses smart phone for fetching the GPS location and sending it to server but our system uses dedicated microcontroller and GPS module which will be attached to the vehicle and our system will provide addition data to the users about the bus system and its usages.

Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

Table of Contents

List of Figures

Chapter 1

INTRODUCTION

The primary goal of this project is to provide users with trustworthy information about the public transportation system, specifically focusing on bus services. The existing public bus transport system lacks a reliable means for users to obtain details about the buses they need to catch to reach specific destinations. To address this issue, a real-time bus monitoring system is proposed.

The core feature of this system is its ability to track buses in real-time. To achieve this, GPS (Global Positioning System) technology is incorporated into the mechanism. Each busis equipped with a GPS module that constantly retrieves its positional data, including latitude and longitude values. This data is then transmitted back to a central server for processing.

Upon receiving the raw position data from the buses, the server transforms it into real-time locations that can be accessed by the users. This information is made available through a user-friendly interface, such as a mobile application or a website. Users can access this interface to obtain accurate and up-to-date information about bus locations, timings, and routes.

One of the key functionalities of the system is to display the estimated arrival time of each bus at every bus stop. By leveraging the real-time bus positions and historical data, the system can calculate the expected time of arrival for each bus at its upcoming stops. This feature enables users to plan their journeys more effectively, knowing exactly when to expect the bus at their desired stop.

In addition to providing arrival times, the system also offers a comprehensive list of buses that travel to a specific location. Users can search for their desired destination and obtain a list of all available bus options. This helps users make informed decisions about which bus to take based on their destination, timing preferences, or other factors.

Chapter 5

CONCLUSION AND FUTURE ENHANCEMENTS

5.1 Conclusion

The application user-friendly UI design is what we anticipate for our outcomes. Additionally, as mentioned in our project proposal, the application will be connected to a computer to display the exact timeline of the anticipated bus. The will also be able to display paths, the direction that the bus will be traveling, and estimate arrival times.

5.2 Future Enhancements

- Enable path of the bus in maps.
- Filtering the results based on time.
- Selecting best route to reach a destination

VIVEKANANDA
COLLEGE OF ENGINEERING AND TECHNOLOGY

[A UNIT OF VIVEKANANDA VIDYAVARDHAKA SANGHA,PUTTUR(R)]
AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY APPROVED BY AICTE NEW DELHI & GOVT OF KARNATAKA

JnanaSangama-2023

IEEE
VCET Student Branch

Certificate of Participation

PROUDLY PRESENTED TO

Mr. /Ms. Karthik H Amin of Shri Madhwa Vadiraja Inst. of technology & management for presenting the Paper/ ~~Poster~~ titled Public Bus Information and Tracking using IOT. at JnanaSangama-2023, National level student conference held on 5 May 2023 at VCET, Puttur

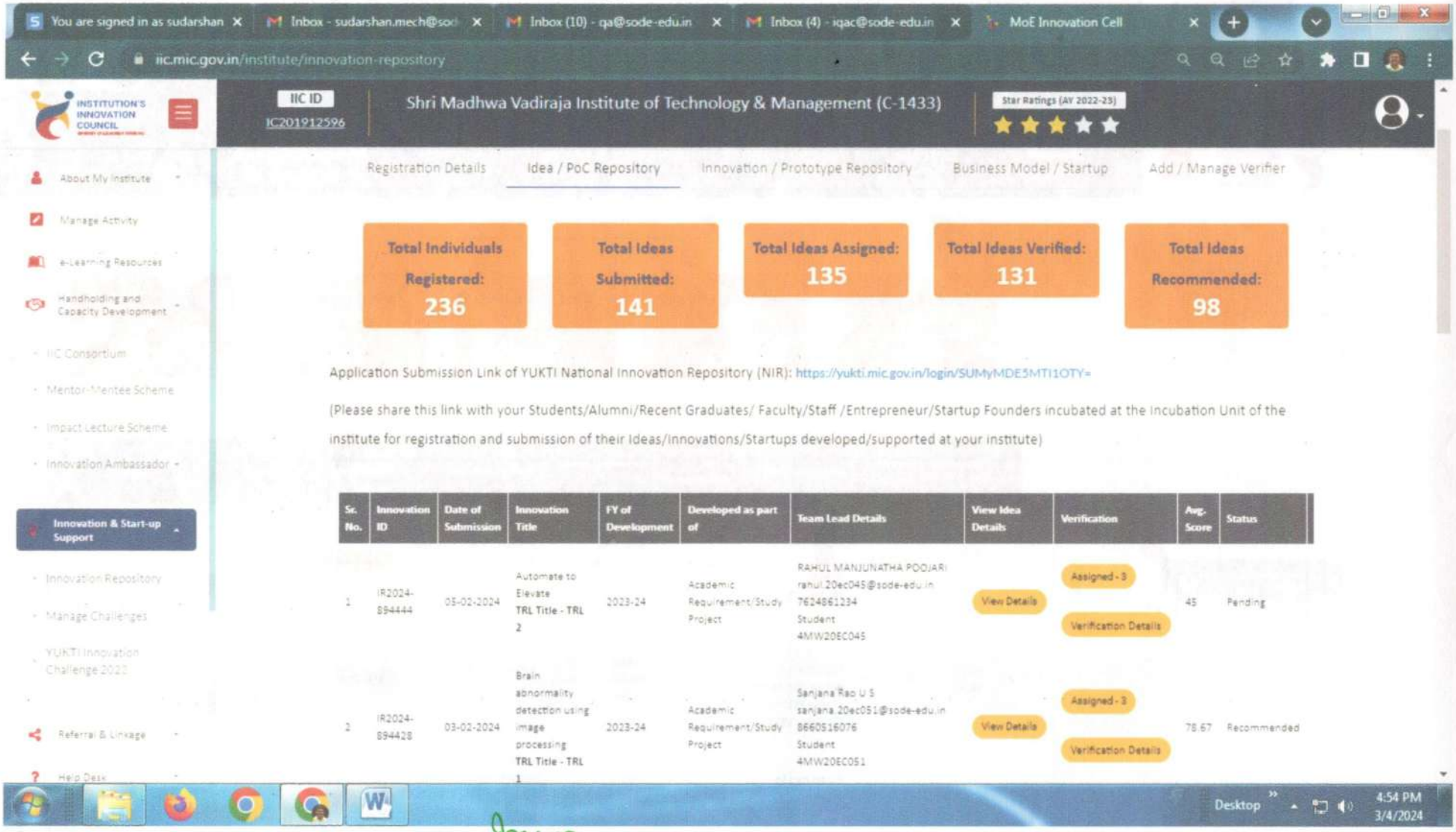
Mrs. Rajani Rai B
CONVENER

Dr. Mahesh Prasanna K
PRINCIPAL

In association with,
Indian Society for Technical Education, New Delhi & Vivekananda Centre for Research Studies, Puttur & IEEE VCET Student Branch STB11471

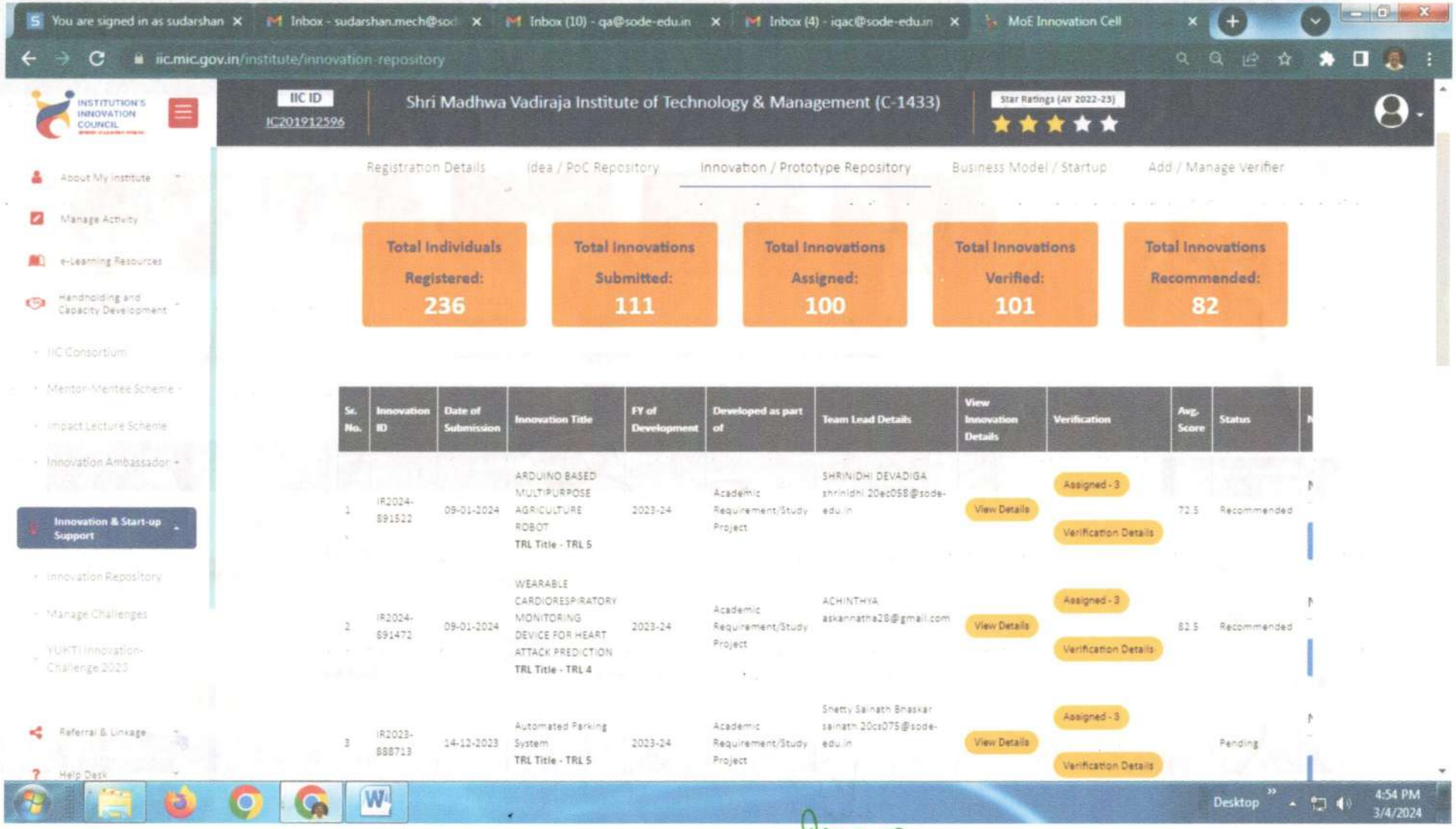
Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL-574115

SMVITM student project ideas (Technology Rediness Level 1-3) submitted, verified and Recommended



Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574 115

SMVITM student project innovations (Technology Rediness Level 4-6) submitted, verified and Recommended



Principal
SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar Udupi Dist
BANTAKAL - 574 115