RAJARAJESHWARI COLLEGE OF ENGINEERING

NEWS LETTER

SAMPARKA VANI

ELECTRONICS AND COMMUNICATION ENGINEERING

Sri. A. C. Shanmugam
B.A. L.L.B, FIMSA, FRCPS (Glasgow, U.K)
Chairman, RRGI

Sri. A.C.S.Arunkumar
B.Tech (Hons), LMISTE,MIET., (UK).,LMCSI.,
Vice-Chairman RRGI

Dr. R Balakrishna
Prinicipal, R.R.C.E.

Dr. Rangaiah L
Professor and Head, Department
of ECE, R.R.C.E.

VISION

Our aim is to provide a program of high quality to produce creative technocrats and also establish an excellent R & D Centre to pursue research in the frontier areas of Electronics and Communication Engineering.

MISSION

To emerge as a centre of excellence in the field of Electronics & Communication Engineering, the graduates able to produce innovative solutions to the needs of the society, cognizant to the universal moral values, and adherent to the professional ethics.

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1-Skill and Knowledge
To impart students with a strong background in the basic science, mathematics and electronics and communication engineering fundamentals required for solving engineering problems.

PEO 2 -Lifelong learning
To train students with good scientific and engineering breadth so as to comprehend, analyze, design, and provide technical solutions for the real-life problems.

PEO 3- Attitudes
Exercise excellent leadership qualities to address issues in a responsible, ethical, and innovative manner with continuous learning and broader societal context.

PROGRAM SPECIFIC OUTCOMES (PSO)

PSO1:
The ability to understand and apply principles of Electronics and Communication Engineering in the analysis, design and development of various types of integrated electronic systems as well as to interpret and synthesize the experimental data leading to valid conclusions.

PSO2:
To solve real time problems with creative ideas, enabling the students to have successful career in industry and also motivate for higher education to promote research and development activities

EDITORIAL VOICE

Dear Readers,

It is my pleasure that we are reaching you regularly through the bi-annual Newsletter "SAMPARKA VANI" of Electronics and Instrumentation Engineering by sharing our view, vision and disseminating information about our achievements and activities. We believe that this newsletter for 2023-24 odd semester will serve as a window showcasing the complete profile of Electronics and Instrumentation Engineering and its achievements, progress made and curricular activities during the stipulated period. At ECE, we're dedicated to creating an environment that will improve the nation's infrastructure while standardizing new products and technology. We look forward to your continued support and suggestions to further improve the Newsletter.

Best Wishes and Warm Regards,

Dr. Rangaiah L, HoD, ECE
Prof. Chaithanya S, Asst. Prof. ECE

DEPARTMENT OVER VIEW

Department of Electronics & Communication Engineering have started in the year 2006-07 with a sanctioned intake of 60 students. The programme is approved by AICTE, New Delhi and affiliated to Visvesvaraya Technological University, Karnataka.In the academic year 2013-14 sanctioned intake is increased to 120 from 60 students and also started M. Tech Programs in "Digital Electronics & Communication Engineering" and "Communication Systems" in the year 2011 and 2014 with intake of 18 Department of Electronics and Communication Engineering has a research center approved by VTU, Belagavi in the year 2016.

The Department offers UG, PG and Ph.D. Programs under VTU. The program is accredited by NBA for the 2015 and 2019.There are a total of 23 faculty members. Many of them having more than 10 years of experience. There are faculty members with good amount of industry experience. The department is geared up to conduct National and International conferences in association with Springer, IETE and ISTE. The Number of workshops, Industrial visits FDPs, Seminars and Conferences conducted in the campus are increasing every year. We are also collaborating with industries such as Karnataka Hybrid Micro Devices, P-Thinks & Win global Tech, Apsis Solutions Pvt Ltd, Bangalore. Faculty and Student projects are proposed for VGST, KSCST and VTU funding. Our students have excelled sports such as Karate, Cricket and Kabaddi and participated in state level and University level. All the activities are held through professional societies like ISTE, IETE and Department club.

ABOUT ECE R&D CENTRE

Department of Electronics and Communication Engineering had the approved Research Centre by VTU, Belagavi in the year 2016.There are Five faculty members approved as supervisors in the department. Total number of students registered in the research centre is Ten and Four are completed the Viva Voce examination. About 08 of our faculty are pursuing Ph. D in our research center and other research centers. Faculty members of ECE are published 145 papers in reputed journals and International Conferences and also published 16 patents. Our faculty got the funding for the project proposals from AICTE, VTU TEQIP, KSCST, VTU and CSIR.

ECE Department has Centre of Excellence in Wireless Sensor Networks and Product Design Students are encouraged to do innovative and product-based projects related to advance technologies and encouraged to publish papers in the International & National conference and journals. We have adopted integrated teaching-learning practices. Workshops, symposiums &Technical Seminars are organized on regular basis. Our students have received best paper awards in the conferences. Students are counseled according to the industry & academics requirement, encouraged to have hands on exposure.

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SEMINAR ON
Data Engineering

Alumnus : PAVAN R

Batch : 2022 Passedout

Organization : HCL Technologies

Designation : System support Data Analyst
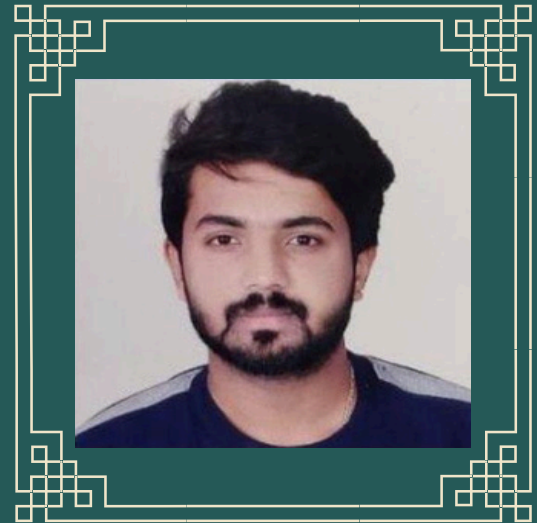
Alumnus interaction with the students & honored with Memento as a token of appreciation

Mr. PAVAN R
Interacting with Students about himself

The event started with welcoming the alumnus for the event by HoD-Dr.L Rangaiah, Dr.S.M Vijaya, Prof. Haritha, Prof. Shripathi., II year and IV year ECE Engineering students participated.
Around 65 students from both the classes participated in the event.
He went through all the challenges he came across in his engineering life that let him down and later told about the moral support he got from his mentors that made him stand in this position today.

- He explained about the data results and how best to use data to support project objectives.
- He even told us about the data science and data analysis..
- He even guide us about the importance of Communication skills and presentation.

After the interaction with the students, the resource person was honored with Memento as a token of appreciation to conclude the event.
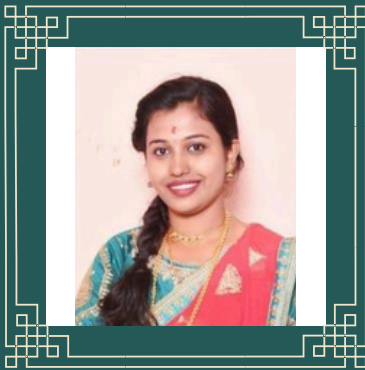
Date & Time
Venue : Satyendranath Seminar Hall
: 25/11/2023 & 10.30am to 11.30am

A Talk on
Motherboard Peripherals
Connections and Functions

Venue   : Satyendranath Seminar Hall

Date &Time   : 25/11/2023 & 10.30am to 11.30am

Alumnus   : PRARTHANA D RAJ

Batch   : 2018 passed

Organization   : UST GLOBAL
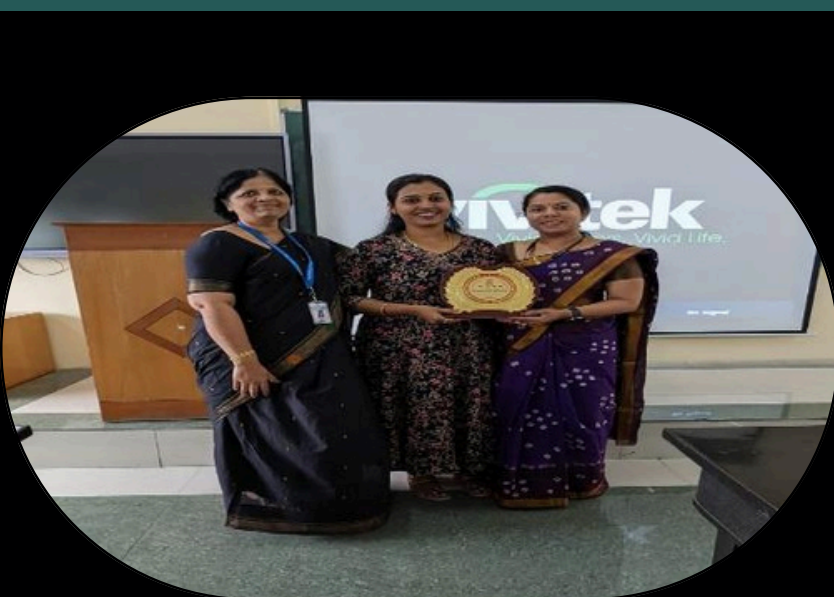
Designation   : Debug Engineer

Summary of the event:

The event started with welcoming the alumnus for the event by HoD-Dr.L Rangaiah, Dr.S.M Vijaya, Prof.Haritha, Prof.Shripathi., II year and IV year ECE Engineering students participated. Around 65 students from both the classes participated in the event.

She went through all the challenges he came across in her engineering life that let her down and later told about the moral support she got from his mentors that made her stand in this position today.

She let us know about the Soc validation and debugging for troubleshooting hardware and software issues.

She even told us about the pre silicon and post silicon environments. She even guide us about the importance of Communication skills and presentation skills one should have while entering the industries. After the interaction with the students, the resource person was honored with Memento as a token of appreciation to conclude the event.

CAREER GUIDENCE

GPS Map Camera

Bengaluru, Karnataka, India
Mysore Road Rajarajeshwari Engineering of College,No.14, Romojhalli Cross, Rajrajeswari College Of Engineering College Block, Rajrajeswari College Of Engineering, Bengaluru,

Mr.Vijaya Mahantesh adressing to the students on the various job opportunities being a specialist with embedded systems.
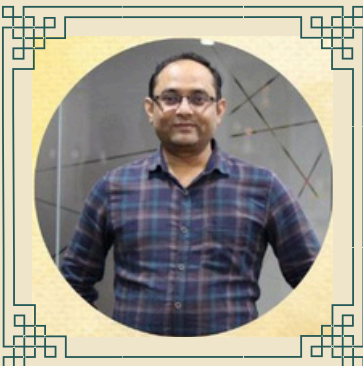
Type of Event   : Career Opportunities in Embedded System with IOT

Resource Persons   : Mr.Vijaya Mahantesh, Technical Director,Cadmaxx Edtech, Pvt Ltd

Date of the Programme : 08/12/2023

Participants   :5TH SEM ECE & EEE STUDENTS

Students gained information about the following:

Career opportunities in Embedded systems and IoT some of the popular jobs that you can go for after embedded systems and IoT are as follows whose main function is to update code and

provide frequent reports on their actions.

- Engineer in embedded Linux

- Embedded IoT application developer

- Cyber security embedded developer

- Cyber security embedded developer

- Engineer of microcontroller firmware.

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INDUSTRIAL VISIT

Addressed by: MANUSUDHNA B S

M Tech [Ph.D.]-Gold Medalist in AI

ABOUT VIHAAN TECHNOLOGIES:

ADVI GROUP of Companies with diversification in ventures with nearly one decades of experience in managing the systems and workings of global enterprises, we expertly steer our clients through their digital journey. We also empower the business with agile digital at scale to deliver unprecedented levels of performance and customer delight. Our always-on learning agenda drives their continuous improvement through building and transferring digital skills, expertise, and ideas from our innovation ecosystem with. It is about who we are. It is our character. It is reflected consistently in all our behavior. The Spirit is deeply rooted in the unchanging essence of ADVI. But it also embraces what we must aspire to be. It is the indivisible synthesis of the four values A-ADWITEYA, -DECISIVE, V-VIHAAN, I-IMBUE. The Spirit is a beacon.

It is what gives us direction and a clear sense of purpose. It energizes us and is the touchstone for all that we do in the domain of Electronic Design Services (EDS) for VLSI/EMBEDDED Systems, CONSTRUCTIONS and Society Based Services. On IT-SERVICES solutions lend customers in the IT and Engineering R&D businesses, the competitive advantage to stay relevant in the market and achieve business objectives consistently delivering a wide variety of end-to-end services, including design, development, & testing for customers around the world. Our engineers have expertise across a wide range of technologies, to the engineering efforts of our clients.

ABOUT THE SPEAKER:

The founder of ADVI GROUP of Companies is MANUSUDHNA B S, M Tech (Ph.D.), LL.B - Gold Medalist in AI Mr.B.S.Manusudhan, M Tech (Ph.D.), LL.B dynamic Entrepreneur in the field of designing products had worked with CIL R&D Division- SAP Division, Radio Frequency & Wireless Antenna Design VTU - R&D Wing, Aavishkar Research Cell. With the vision to develop the employability and entrepreneurship skill in today's young generation that Helps to overcome the unemployment threats. Transferring manual functions to computerized systems is there vision of life, with this vision they established VS Technology in 2010. VS Technology is supported by strong dynamic Team.

Date: 26/12/23

Venue: VIHAAN TECHNOLOGIES

Faculty Development Program on
CADENCE EDA TOOL
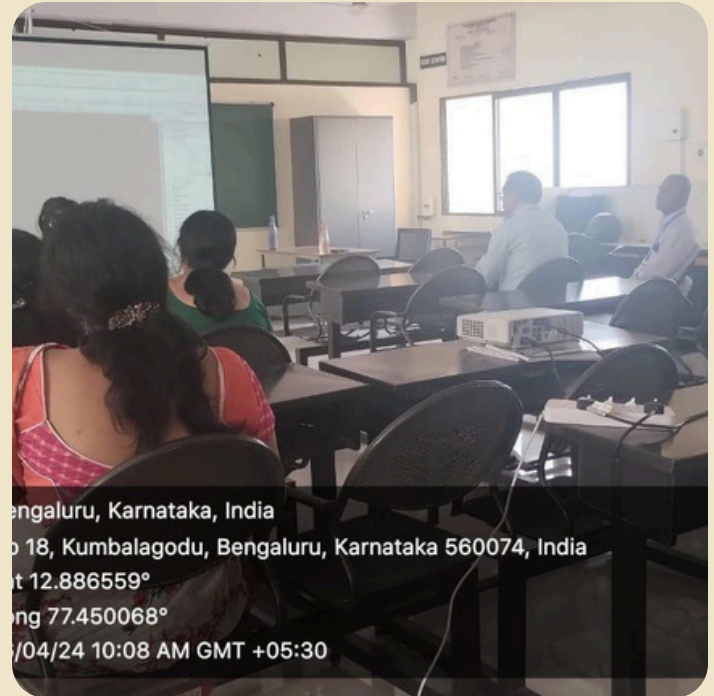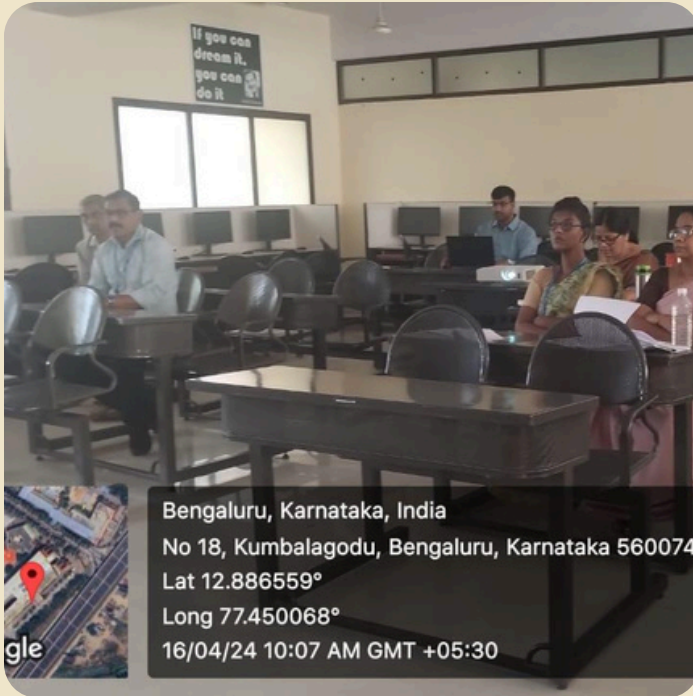
Venue: VLSI Laboratory

Date & Time: 16/04/2024 & 09:00 A M to 04:00 P M

Resource Preson: SHIVAPRASAD B K

Organization: Entuple Technologies LTD.

Designation: Sr. Field Application Engineer

Summary of the event:
After the session, the resource person was honored with a memento as a token of appreciation.
The event started with welcoming Shivaprasad B K by HoD-Dr. L Rangaiah and
Dr. S.M Vijaya.
ECE faculty participated in the "Cadence EDA Tool" development program. Digital VLSI and Analog VLSI were also discussed during the session.
Shivaprasad B K discussed the following topics.

➢ Introduction to Semi-Custom IC Design Flow
➢ Cadence Solutions for Semi-Custom IC Design
➢ Timing Analysis, Power Analysis and Parasitic Extraction.
➢ Testbench Creation using Virtuoso Schematic Editor.
➢ Functional Simulation using Spectre
➢ Physical Verification which includes DRC & LVS

Faculty Development Program on
ENHANCING THE TEACHING & LEARNING PROCESS USING ICT TOOLS

Resource Persons :

1.Dr.Kendaganna Swamy S Assistant Professor Dept.of Electronics and Instrumentation Engineering RVCE, Bangalore-59
2.Dr.Rajashree M P Assistant Professor Dept.of Electronics and Instrumentation Engineering RVCE, Bangalore-59
3.Dr.Shruthi P Assistant Professor Dept.of Information Science Engineering RVITM

Participants : All department Faculties of RRCE and ACSCE

Outcome of the programme:

Faculty gained information about the following:

- Teaching Learning Process in Engineering Education.
- Web page Design using Google Sites. Integration of Quiz in Lecture Video using EdTED Tool and Mail Merge with Attachment in TLP. Innovative Teaching using KAHOOT and MENTIMETER Tools
- Google Forms constrained creation using Regular Expressions and Best Practices of TLP.
- Game Based content design using JEOPARDY Lab Tool.

Date of the programme : 13/11/2023 to 18/11/2023

Faculty Development Program on
LAB VIEW

Addressed by: Sathvik U M & Jayanth
DigiToad Technologies Pvt. Ltd.
Bangalore

Objectives: The main objective is to motivate faculty to learn the new software which can fill the gap between the industry and academics. The mentioned titles are discussed by the guest speaker which is: VI Lab experiments with the basic working principles of Lab VIEW software.

Outcomes: Faculty can effectively teach the students about the Lab VIEW software

Number of participants: 30 Faculties

1. The Demonstration

The demonstration was carried out on the application and working of the new software.

2. Faculty trial

The faculty members used and witnessed the first hand potential of the software.

Date: 13/04/24
Venue: ECE DSP Lab

FOOD
Walk

STAFF CO ORDINATOR : **PROF.VINODHA G**
ECE DEPARTMENT

ADDRESSED BY : **Dr.RANGAIAH. L**
HOD ,ECE

Objectives:

City's culinary practices, food lore, and indigenous materials of the region used in cooking.
An account of that we have conducted our first event called "Food walk."
Also it's a module 5 of social connect and responsibility [BSCK307].

The following mentioned titles are discussed by the addressed by the speaker which are:

o Motivated students to learn extracurricular activities.

o Encourage students to developed enhanced their skills.

o Followed by that he has reviewed all the students' dishes in both the days.

DATE: 05-02-2024 & 07-02-24

VENUE : ECE DEPT., RRCE

Outcome:

Students presented their health related dishes and explained the benefits of each and every ingredients and their medicinal benefits. Also they completed their activity 5 of SCR subject successfully.

NO OF STUDENTS PARTICIPATED: 130

HERITAGE WALK ✿

EVENT NAME: HERITAGE WALK

STAFF CO-ORDINATOR: PROF.VINODHA G

ADDRESSED BY: DR.BALAKRISHNA R

GUEST: DR.RANGAIAH.L

EVENT JUDGES: DR.SAVITHA

                      Sub.Lt.THANUJKUMAR M

                      PROF.CHANDRU

Objectives:

- The main aim of this heritage club is to show our traditional culture among current trend students with some events.
- An account of that we have conducted our first event called "Heritage Walk."

The following mentioned titles are discussed by the guest speaker which are:

- Motivated students to learn extracurricular activities.
- Encourage students to developed enhanced their skills.
- Followed by that he has inaugurated our event.

Outcomes:

Students learned different states traditional and highlights

Total Number of participants: 20

Total Number of students attended: 180+

TECHNICAL TALK

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ABOUT SPEAKER:

Manjunath J is currently working as Analog design engineer @ Intel Corporation Bengaluru. He has one patent and one publication in analog design. He has got 2nd Rank in DCET in Karnataka state in engineering entrance exam. He has received M.Tech in VLSI DESIGN & EMBEDDED SYSTEM, from B M S College of engineering Bengaluru and BE in Electronics & Communication from R V College of engineering Bengaluru. He has been topper in his most of the academic years and grabbed so many scholarships

Objectives:
TITLE:
Transistor Revolution and Cutting edge technology for future of semiconductor world
To enhance students Technical skills
To understand what the companies are need from ECE students.
The following mentioned titles are discussed by the addressed by the speaker which are:
Motivated students to learn Technical skills activities.
 Explained briefly about Semiconductors stages with demo videos and manufacturing video Followed by that he has briefly discussed about MOSFET and IC's.
Finally he has interacted with students and explained Projects and what companies are
looking from our engineering students

Outcomes:

Students learned about MOSFET, IC, and SEMICONDUCTORS.

Also they gained the knowledge about some projects which will be helpful for their upcoming semesters.

Total Number of participants: 108

CONGRATULATIONS

**KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY (KSCST)
FUNDED PROJECT**

ECE – KSCST (Student Project) 2023-2024

Karnataka State Council for Science and Technology (KSCST), Indian Institute of Science, Bangalore (Government of Karnataka) sponsored Final Year Projects at RRCE ECE dept for the Academic Year 2023-2024, under Students Project Proposal-SPP: 47th Series.

AUTISM CARE SYSTEM FOR IMPROVING COGNITIVE ABILITY OF CHILDREN USING AI AND IOT

Dr. S. M. VIJAYA	Mr. MOHAMMED TAHIR HUSSAIN	Ms. PRUTHVI SHREE S. N.	Ms. RAKSHA M	Mr. UJWAL E.

INNOVATION IN TRAIN DEFECT RESOLUTION

Prof. SANTOSH CHAVAN	Prof. AJAY M.	Ms. KALPITHA R. GOWDA	Mr. M. SHIVA KRISHNA	Mr. JATHIN B. R	Mr. SRINIDHI R. K

SMART STROKE PREDICTION

Prof. V. SREEPATHI	Prof. SURESH M.	Ms. POORNIMA R.	Mr. AKSHAY KUMAR R	Mr. DEEPAK L.	Ms. DHANUSHREE N. A
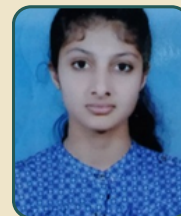
SMART SELF DEFENCE BAND FOR WOMEN SAFETY

Dr. DEEPIKA J.	Prof. HARITHA K. SIVARAMAN	Ms. AISHWARYA M.	Mr. K. JAI AKHIL	Ms. LIKITHA S.	Mr. RAKSHITH S
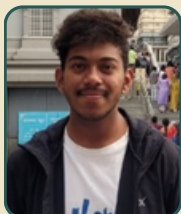
13
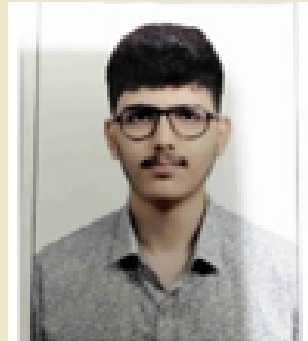
CONGRATULATIONS

NPTEL
NPTEL ONLINE COURSE CERTIFICATION EXAMS

Congratulations to the students who completed the NPTEL online certification course successfully.

Prutvishree N
1.Digital system design
2.Robotics and Control

Rakshit S
Mechatronics

Nagamallesh N
The Joy of Computing Python

Siddesh Gowda
The Joy of Computing Python

Vidya shree
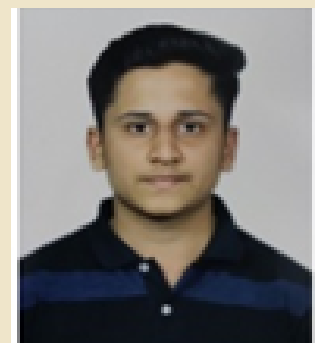The Joy of Computing Python

Kalpitha R
Embedded System Design

Abhishek S
CMOS Digital VLSI Design

Vidyavati S Khot
Developing Soft Skills And
Personality

Shrihari Chandrakantha Mallya
Hardware Modeling Using
Verilog

CONGRATULATIONS

NPTEL
NPTEL ONLINE COURSE CERTIFICATION EXAMS

Heartly wishes to the Faculties of ECE for Successful Completion of the Certification course

Dr. Sunitha R
Python for Data Science

Dr. Deepika J
Python for Data Science

Prof. Haritha K S
Python for Data Science

Prof. Vani S B
Python for Data Science

Prof. Chaithanya S
Python for Data Science

Dr. Vijaya S M
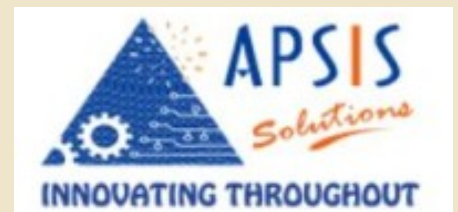Hardware Modeling Using
Verilog

Prof. Vinoda G
Digital circuits

Dr. D Sobya
Adolescent Health and Well-being : a
Holistic Approach

INDUSTRY COLLABORATIONS

FACULTY PUBLICATION

- R Vaishali, B Sarojini, D Sobya, "Prediction of COVID-19 Vaccine Side Effects using SMOTE and Ensemble Machine Learning Models," *International Journal of Engineering Trends and Technology,* vol. 72, no. 4, pp. 324-332, 2024. Crossref, https://doi.org/10.14445/22315381/IJETT-V72I4P133

- Quiroz-Flores, Juan Carlos, Martín Fidel Collao-Diaz, D. Sobya, and S. Nallusamy. "RFID Technology in Storage Management: A Bibliometric Study on Efficiency and Cost Reduction in the Retail Sector." SSRG International Journal of Electronics and Communication Engineering ISSN: 2348-8549/ https://doi.org/10.14445/23488549/IJECE-V10I10P101

- Saranya, R. M. Vijayaragavan, S. Ismail Kalilulah, K.N.V. Satyanarayana, M. Suresh, S. Srimathi "Automated Facial Emotion Detection using Arithmetic Optimization Algorithm with Deep Convolutional Neural Network for Autonomous Vehicle Drivers." 2023 2nd International Conference on Automation, Computing and Renewable Systems (ICACRS) (2023): 823-828.

- Sivaraman, H. K. ., & L., R. . (2023). An Energy Efficient Design in LEACH Protocol Using Reactive Approach in Wireless Sensor Network. International Journal of Intelligent Systems and Applications in Engineering, 12(9s), 457–465. Retrieved from https://ijisae.org/index.php/IJISAE/article/view/4340

- S. Murugesan, A. CM, A. Bhuvanesh, S. Manoj, P. E. Darney and K. S. Rajan S, "Smart Home Automation with Smart Metering using ZigBee Technology and Deep Belief Network," 2024 2nd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT), Bengaluru, India, 2024, pp. 988-992, doi: 10.1109/IDCIoT59759.2024.10467342.

- Dr. Mangala Gowri S.G., Dr. Nataraj Vijapur, Dr. Sunitha R., Dr. Pavithra G., Dr. T. C. Manjunath "Design & development of an user identifcation authentication system using radio frequency identification (RFID) technology for long range communication scenarios" Tuijin Jishu/Journal of Propulsion Technology, Vol. 44 No. 4 (2023)

- Sunitha. R, Chaithanya. S, Bhagya. P, L. Rangaiah and Y. J, "Ayurvedic Flora Detection Using CNN Algorithm," 2023 International Conference on Network, Multimedia and Information Technology (NMITCON), Bengaluru, India, 2023, pp. 1-5, doi: 10.1109/NMITCON58196.2023.10276130.

- I. Sakthidevi, G. V. Rajkumar, R. Sunitha, A. Sangeetha, R. S. Krishnan and S. Sundararajan, "Machine Learning Orchestration in Cloud Environments: Automating the Training and Deployment of Distributed Machine Learning AI Model," 2023 7th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC), Kirtipur, Nepal, 2023, pp. 376-384, doi: 10.1109/I-SMAC58438.2023.10290278.

SPORTS

Congratulations to our ECE department students for their effort in securing runner ups in state level tournament held at CMRIT on 14/12/2023

Congratulations to our 1st sem ECE students had participated in Annual sports meet of 23-24 in RRCE and won the second runner up prize in kabaddi held on 10th November 2023.

NCC
एकता और अनुशासन

Congratulations to Elavarasan E and B M Rohith on completing their C certificate in NCC with the 1 Kar Naval unit! Your dedication and hard work are truly commendable.

ALUMNI VOICE

RRCE has been a learning platform for the 4 best years of my life. This prestigious institution has played a huge role in making me the person I am today. I had the best coaching, supportive faculty, and friendly staff members who were always guiding me in the right direction, and to top it off, I also had good friends who always supported me in my every step.

If I want to summarise my education here, I will say "I learnt how to learn with passion" which was a key in building my career.

The reason I have been able to take up various opportunities, compete & perform well with confidence is because of the values that I learnt here, which went hand in hand with the emphasis on ensuring that we were very strong with the basics in our stream!

I am always grateful to my alma mater for all the guidance and teaching.

Shubhaprada S
BE-ECE,
BATCH:2014-2018
Senior Engineer
LTIMindtree, Bangalore

I am profoundly grateful for the immense support and encouragement provided by our department of ECE. Their belief in my potential has been a constant source of motivation, driving me to push beyond my limits and strive for excellence.

I am thankful for every opportunity provided, every word of encouragement shared, and every challenge that has helped me grow. ECE, department not only equipped me with academic knowledge but also instilled invaluable life skills and a strong sense of purpose. I consider myself extremely fortunate to be a part of this supportive and encouraging community, and I will always carry the knowledge and experiences I have gained from my time spent here.

Chaitra N
BE-ECE,
BATCH 2017-2021
Software Engineer
Tata Elxsi, Bangalore

Student ECE Photography

Tejeswar Reddy

Nishanth

ಅವರೇ ಹುವು.......

Chandu H L

Nishanth

Tejeswar Reddy

Chandu H L

Tejeswar Reddy