



SR
UNIVERSITY



School of
Engineering

ELECTROVORTEX

NEWSLETTER VOLUME 01 | ISSUE 02 | MAY - AUG 2023

Department of Electronics & Communication Engineering



Interanational
Collaboration



Empowering
Tomorrow's Engineers:
The ECE Faculty Team and
the Vice-Chancellor

Exploring Industry
Opportunities



Our Center



Academic
Collaborations

arm



CIHAN
UNIVERSITY-ERBIL



UTKISIC
INSTITUTE OF SCIENCE INNOVATION AND CULTURE

PaperSign

PrimePro
Learning



ABE SEMICONDUCTOR DESIGNS
INNOVATING SMART FUTURE

www.sru.edu.in

Editorial Board: Chief Editor: Dr. Sandip Bhattacharya | Staff Members: Dr. K. Sreedhar Reddy
Student Members: Ms. U. Sahithi, Mr. D. Pavan Kumar

■ Profile of ECE Department

» Department of Electronics and Communication Engineering (ECE) was started in the year 2002. The department offers 4 years undergraduate (UG) program in B. Tech ECE, B. Tech (AIML), B. Tech (IoT), B.Tech (VLSI Design), and 2 years post graduate (PG) program in M. Tech (ES), M.Tech (EDT), M.Tech (IoT), M.Tech (VLSI), and Ph.D. (ECE).

» The department has experienced, qualified, dedicated, and trained faculty with a deep sense of commitment toward the students and institution. The department has well-equipped and state-of-the-art laboratories for both UG and PG programs. The department has its own vision and mission on par with the vision and mission of the university.

» The department of ECE is accredited by NBA under Tier-I in 2018, New Delhi and NAAC Bengaluru.

■ Highlights of the Department

» Faculty have published 448 research publications which are cited in Web of Science, Scopus, and Google Scholar.

» Faculty have published 52 patents in their domain.

» Training for placement is offered in the department along with mock interviews by Alumni who are well placed.

» In the year 2018, the Center for Embedded Systems and Internet of Things lab was founded.

» We have been voted **the Best Engineering College in town for ECE** due to our excellent career chances and 100% placement rate.

WHY SRU

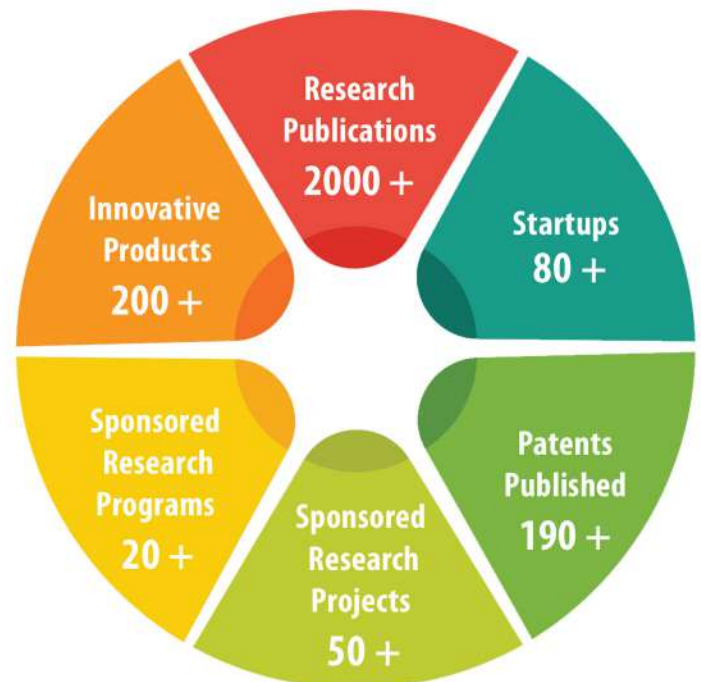
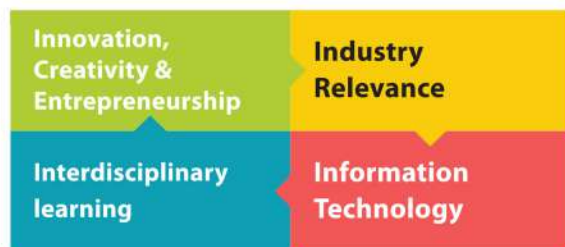
outstanding contribution from faculty and students include patents, research publications, sponsored projects and research programs

Vision

To accelerate the pace of transformation and advancement of the Regional Innovation Ecosystem through Academic Excellence, Industry Relevance, and Social Responsibility.

Innovative Experiences for Next Generation Change Makers

SR University has been built on the strong foundation set by SR Engineering College over the past 22 years. The college has provided innovative entrepreneurial learning ecosystem in Telangana, facilitating students to think out of the box and come up with creative solutions to modern day challenges. The core values that are common to each program offered at our University are as follows:



Accreditations & Recognitions



NAAC 'A' GRADE ACCREDITED

nirf
98 ALL INDIA RANK IN ENGINEERING CATEGORY



1ST RANK
ALL INDIA RANK IN PRIVATE INSTITUTES CATEGORY



TIER 1
ALL INDIA RANK IN ENGINEERING CATEGORY

Centers of Excellence



- Center for Experiential Learning
- Technical Centers
- Innovation, Creativity & Entrepreneurship
- Research & Development



- Center for Materials & Manufacturing
- Center for AI & Deep Learning
- Center for Embedded & IoT Systems
- Center for Construction Materials and Methods
- Center for Emerging Energy Technologies
- Center for Creative Cognition
- Nest for Entrepreneurship in Science & Technology
- Collaboratory for Social Innovation
- Center for Design
- R&D Cell
- Industry- Institute Partnership Cell

■ Program Outcomes

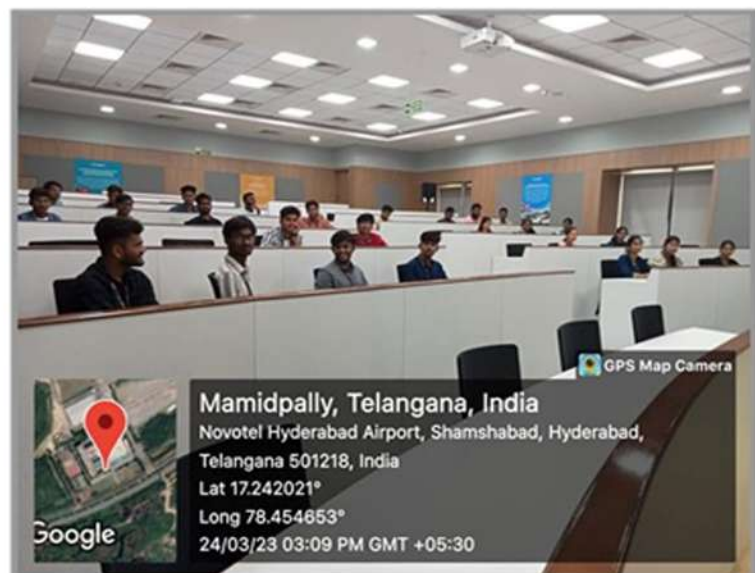
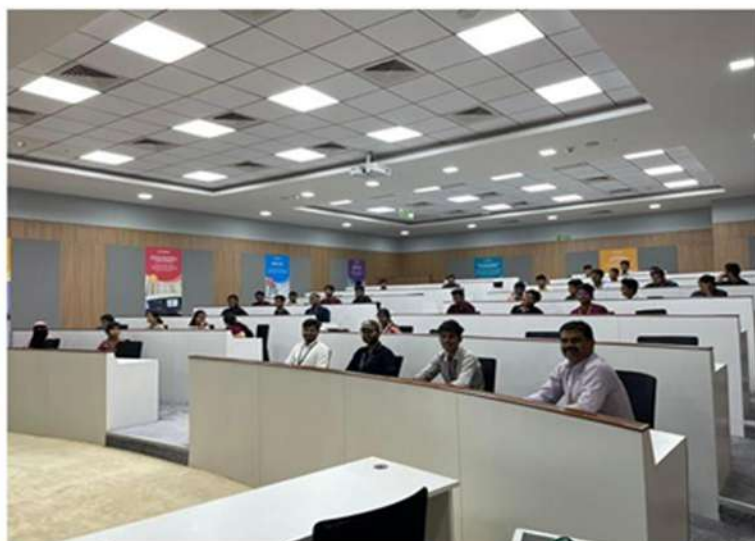
- » **PO1 Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- » **PO2 Problem analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- » **PO3 Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.
- » **PO4 Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- » **PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- » **PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- » **PO7 Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- » **PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- » **PO9 Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- » **PO10 Communication:** Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- » **PO11: Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- » **PO12: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

■ **Program Specific Outcomes (PSO's)**

- » **PSO's 01:** Apply mathematical foundations, electronic principles and computer fundamentals in the modeling and design of electronic-based systems in a way that demonstrates comprehension of the tradeoffs involving design choices.
- » **PSO's 02:** Demonstrate ideas, methodologies with new cutting-edge technologies using system software for product development starting from the lowest level of physical devices to the top level of application development.

■ **Activities of the department:** **Industrial Visit Conducted:**

Name of the Industries	Dates	Number of Students
CYIENT Technology, Hyderabad	18-08-2023 & 24-03-2024	80



■ MoUs initiated and which are in the discussion stage:

SL.No	Organization	Status
1	Cihan University, IRAQ	Completed on July 21, 2023
2	ABE Semiconductor Design, Chennai,	Completed on July 28, 2023
3	PaperSign Software Pvt. Ltd. & PrimePro Learning, Hyderabad.	Completed on 10 August 2023
4	ASSIST, Gunturu, AP	Completed on 18 August 2023
5	Cygnesia, Hyderabad	Completed on August 30, 2023




SR University has entered into an MoU with Cihan University of Iraq to enhance academic collaboration and embrace the potential of IoT.

For more information contact:
+91 833 100 4040 / 833 100 3030

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SR University and ASSIST (Guntur, AP), Join Hands for SDG-driven Collaboration. A New Chapter to Promote Sustainable Development Goals and Empower Students and Faculty in Socially Relevant Projects.

For more information contact:
+91 833 100 4040 / 833 100 3030

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SR University and Paper Sign Software & PrimePro Learning, signed a Memorandum of Understanding (MOU) to facilitate and foster an environment of growth, success, & innovation for students which will e-nable them.

For more information contact:
+91 833 100 4040 / 833 100 3030

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■ FDP will be conducted by the Department:

EXPERT TALK ON

Intelligent high- performance bio-amplifier design for better healthcare



SRU IEEE STUDENT BRANCH **SRU** SR UNIVERSITY

#Expert Talk on
Intelligent high- performance bio-amplifier design for better healthcare.

Speaker
Dr. Soumyajyoti Maji
Lecturer in Medical Electronics at University of Galway, Ireland
Former Post-Doctoral Researcher at Harvard University, USA
Former Research Scientist at Intel, Ireland

Friday 04, August, 2023
1:30 PM IST

Scan the QR code and join us!

Organized by
Dept. of Electronics & Communication Engineering
In association with
SRU IEEE Student Branch
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#Expert Talk on

IEEE Conferences Organization : Step-by-Step Process

Speaker

Dr. Subhajit Das

Post-Doctoral Researcher,
HISIM Research Center,
Hiroshima University, Japan.

Sunday 06, August, 2023

2:30 PM IST



Scan the QR code and join us!

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EXPERT TALK ON

IEEE Conferences Organization Step-by-Step Process

EXPERT TALK ON

Machine Learning for 5G Communication



SRU IEEE STUDENT BRANCH **SRU** SR UNIVERSITY

#Expert Talk
Machine Learning for 5G Communication

Speaker
Dr. Indrasen Singh
Assistant Professor,
School of Electronics Engineering
VIT University, Vellore Tamilnadu

Wednesday 09, August, 2023
03:30 pm onwards

Organized by
SRU IEEE Student Branch
In association with
Dept. of Electronics & Communication Engineering

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■ FDP will be conducted by the Department:

EXPERT TALK ON

Roadmap for FullStack developers and bridging fresh graduates



SR UNIVERSITY

Expert Talk

Roadmap for Fullstack developers and bridging fresh graduates



Friday 01, September, 2023
11:15 am onwards

Faraday Hall, Block-II, SR University

Organized by: Socio Tech Innovative Club
Dept. of Electronics & Communication Engineering

Speaker
Mr. Kazhian Muthusami
Principal Engineer, Wells Fargo

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EXPERT TALK ON

5G for Everyone



SR UNIVERSITY

Expert Talk

5G for Everyone



Speaker
Dr. Ravi Tiwari
Assistant Professor,
VIT Chennai, Tamilnadu

Saturday 02, September, 2023
3:00 pm onwards

Organized by
Dept. of Electronics & Communication Engineering

Scan the QR code and join us!

Contact:
Dr. Ravi Tiwari
Dr. Sumit Gupta
Tel: +91 9734832749

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EXPERT TALK ON

IoT for Smart Applications A Career Guidance



SR UNIVERSITY

WEBINAR ON

IoT for Smart Applications : A Career Guidance

FRIDAY 07, JULY, 2023
2:00 PM

Organized by
Department of Electronics & Communication Engineering



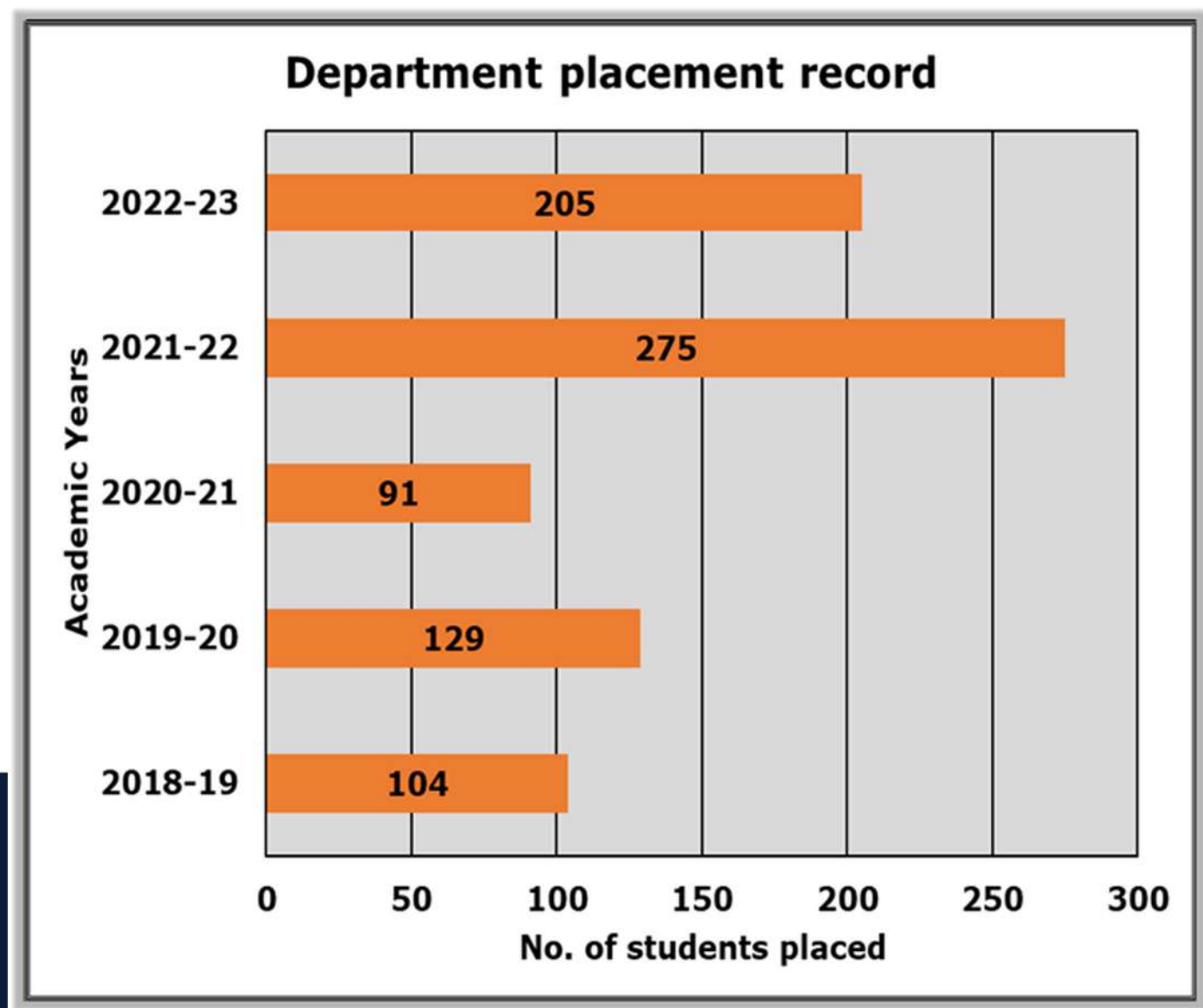
Speaker
Dr. Rajesh Singh
Professor & Director (Research & Innovation),
Uttaranchal University, Dehradun

To participate, simply scan the QR

■ Industry Institute Interaction:



■ No. of placements during last 5 years:



■ Faculty Publications:



IEEE TRANSACTIONS ON ELECTRON DEVICES, VOL. 70, NO. 7, JULY 2023

3401

Organic Electrochemical Transistors (OECTs): Advancements and Exciting Prospects for Future Biosensing Applications

J. Ajayan¹, P. Mohankumar², Ribu Mathew³, Senior Member, IEEE, Laxman Raju Thoutam⁴, Senior Member, IEEE, Brajesh Kumar Kaushik⁵, Senior Member, IEEE, and D. Nirmal⁶, Senior Member, IEEE

Multimedia Tools and Applications

<https://doi.org/10.1007/s11042-023-14457-3>



A novel diffusivity function-based image denoising for MRI medical images

Sreedhar Kollem¹ · Katta Ramalinga Reddy² · Duggirala Srinivasa Rao³

Received: 1 July 2021 / Revised: 4 July 2022 / Accepted: 31 January 2023

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Microelectronics Journal 127 (2022) 105533

Contents lists available at ScienceDirect

Microelectronics Journal

journal homepage: www.elsevier.com/locate/mejo



Minimization of crosstalk noise and delay using reduced graphene nano ribbon (GNR) interconnect

Sandip Bhattacharya^{a,*}, Subhajit Das^b, Shubham Tayal^a, J. Ajayan^a, Leo Joseph^a, Tarun Kumar Juluru^c, Arnab Mukhopadhyay^a, Sayan Kanungo^c, Debaprasad Das^d, Shashank Rebelli^e

^a SR University, Warangal, Telangana, India

^b Indian Institute of Engineering Science and Technology, Shibpur, Howrah, India

^c BITS Pillana, Hyderabad Campus, Hyderabad, India

^d Assam University, Silchar, India

^e CV Raman Global University, Bhubaneswar, Odisha, India

^f KITS, Warangal, Telangana, India

Received: 14 August 2022 | Revised: 19 February 2023 | Accepted: 26 February 2023

DOI: 10.1002/ima.22870

WILEY

RESEARCH ARTICLE

AlexNet-NDTL: Classification of MRI brain tumor images using modified AlexNet with deep transfer learning and Lipschitz-based data augmentation

Sreedhar Kollem¹ | Katta Ramalinga Reddy² | Ch. Rajendra Prasad¹ |
Avishek Chakraborty³ | J. Ajayan¹ | S. Sreejith⁴ |
Sandip Bhattacharya¹ | L. M. I. Leo Joseph¹ | Ravichander Janapati¹

Department Publication



Department Toppers

Course: B. Tech, Year/Semester: II/I, Batch: 2021-2022 Regular Exam, Branch: ECE

S. No	Roll No	Name of the Student	Max Marks	Marks Obtained	Percentage	Rank
1	2105A41036	Gunda Manisha	700	617	88.14	1
2	2105A41059	Billakanti Sindhuja	700	616	88.00	2
3	2105A41083	Mohammad Ibadur Rahman	700	590	84.29	3
4	2105A41076	Dharavath Hymavathi	700	587	83.86	4
5	2105A41163	Mirza Waseem Blag	700	583	83.29	5
6	2105A41007	Devi Reddy Venkata Mahadev Reddy	800	663	82.88	6
7	2105A41074	Adeba Saniya	700	577	82.43	7
8	2105A41084	Palle Chitra	700	575	82.14	8

Course: B. Tech, Year/Semester: II/I, Batch: 2021-2022 Regular Exam, Branch: ECE (AI & ML)

S. No	Roll No	Name of the Student	Max Marks	Marks Obtained	Percentage	Rank
1	2105A42016	Bura Madhukar	700	569	81.29	1

Course: B. Tech, Year/Semester: III/I, Batch: 2020-2021 Regular Exam, Branch: ECE

S. No	Roll No	Name of the Student	Max Marks	Marks Obtained	Percentage	Rank
1	2005A41155	Bathini Bhavani	900	793	88.11	1
2	2105A41103	Bhupathi Akhil	900	778	86.44	2
3	2005A41001	Bathini Anusha	900	776	86.22	3
4	2005A41061	Vangala Srikanth Reddy	900	773	85.89	4
5	2005A41045	Nallabelli Vinayak	1000	858	85.80	5
6	2005A41150	Dameruppula Abhinay	900	772	85.78	6
7	2005A41002	Alladi Tanmayi	900	769	85.44	7

Course: B. Tech, Year/Semester: III/I, Batch: 2020-2021 Regular Exam, Branch: ECE (AI & ML)

S. No	Roll No	Name of the Student	Max Marks	Marks Obtained	Percentage	Rank
1	2005A42002	Sabbani Nikhitha	1000	905	90.50	1

Course: B. Tech, Year/Semester: III/I, Batch: 2020-2021 Regular Exam, Branch: ECE (IoT)

S. No	Roll No	Name of the Student	Max Marks	Marks Obtained	Percentage	Rank
1	2005A43005	Peddi Meghana	900	776	86.22	1



■ Student certifications: No.of certifications during last 5 years



IUCEE Certificates



National Instruments Certificates




Coursera, Mathworks, and Google Certificates



■ Student Key Projects and Research Work:

❖ Impactful projects carried out by our students

Title: LINE FOLLOWING ROBOT



Block diagram:

```


    graph LR
      IR_Sensor1[IR Sensor] --> Arduino[Arduino Uno]
      IR_Sensor2[IR Sensor] --> Arduino
      Arduino --> Motor1[Motor 1]
      Arduino --> Motor2[Motor 2]
      Arduino --> Motor3[Motor 3]
      Arduino --> Motor4[Motor 4]
  
```

Team members:

G. SATYADRA	(2205A41009)
M. MADHUMITHA	(2205A41018)
M. PRIYANSHU	(2205A41023)
M. AVINASHREDDY	(2205A41022)

Mentor
Dr. Ch. Rajendra Prasad
Associate Professor, Department of ECE

Title: IoT BASED WEATHER MONITORING SYSTEM



Block diagram:

```

    graph LR
      Temp_Sensor[Temperature Sensor] --> ESP8266[ESP8266]
      Humidity_Sensor[Humidity Sensor] --> ESP8266
      Rain_Sensor[Rain Sensor] --> ESP8266
      ESP8266 --> NodeMCU[Node MCU]
      NodeMCU --> Smartphone[Smartphone]
      NodeMCU --> Mobile_Phone[Mobile Phone]
  
```

Team members:

G. CHANDANA	2205A41009
K. VICHITRA	2205A41014
CH. PRATHYUSHA	2205A41004
K. NANDITHA	2205A41011

Mentor
Dr. Ch. Rajendra Prasad
Associate Professor, Department of ECE

❖ Sample projects carried out by students

❖ Automatic water filling system



❖ Smart Helmet



■ Research work carried out by our students

2023 International Conference for Advancement in Technology (ICATAT)
Visa, India, Jan 19-20, 2023

Breast Cancer Classification using CNN with Transfer Learning Models

Ch. Rajendra Prasad Dept. of ECE SR University Warangal, India chrajendra201@gmail.com	Sreeniwas Reddy Dept. of ECE SR Engineering College Warangal, India sreeniwasreddy201@gmail.com	Sreedhar Kollam Dept. of ECE SR University Warangal, India kollam201@gmail.com
Basanthi Arora Dept. of ECE SR Engineering College Kannur, India arorabanthi1@gmail.com	Prasanthi Adithyana Dept. of ECE SR Engineering College Hassan, India prasanthi.adithyana@gmail.com	Srikanya Yalabaka Dept. of ECE SR University Warangal, India srikanya.yalabaka7131@gmail.com

Lane Detection using Deep Learning Techniques

Srikanya Yalabaka Dept. of ECE SR University Warangal, India srikanya.yalabaka7131@gmail.com	Ch. Rajendra Prasad Dept. of ECE SR University Warangal, India chrajendra201@gmail.com	P. Sujana Dept. of ECE SR Engineering College Warangal, India ponagajana1@gmail.com
B. Lakshmi Dept. of ECE SR Engineering College Warangal, India lakshmi.b.0143@gmail.com	T. Shreshtha Dept. of ECE SR Engineering College Warangal, India shreshtha2009@gmail.com	Srinivas Samala Dept. of ECE SR University Warangal, India srinivas19@gmail.com

Proceedings of the 7th International Conference on Trends in Electronics and Informatics (ICEI 2023)
BUSE, Egypt, Part Number: CPT2023-AR, ISBN: 978-9-5847-28-4

Disease Identification in Tomato Leaves Using Inception V3 Convolutional Neural Networks

Srinivas Samala Dept. of ECE SR University Warangal, India srinivas19@gmail.com	Natasha Bhattacharya Dept. of ECE SR Engineering College Warangal, India natasha.bhattacharya201@gmail.com	Raghav Bang Dept. of ECE SR Engineering College Warangal, India raghav.bang73@gmail.com
Devanagadhy Koushik Rao Dept. of ECE SR Engineering College Warangal, India koushik1403@gmail.com	Ch. Rajendra Prasad Dept. of ECE SR University Warangal, India chrajendra201@gmail.com	Srikanya Yalabaka Dept. of ECE SR University Warangal, India srikanya.yalabaka7131@gmail.com

2023 2nd International Conference on Intelligent Technologies (ICITAT)
Ravenna, Italy, June 14-16, 2023

ECG Noise Removal Using FCN DAE Method

Sreedhar Kollam Dept. of ECE SR University Warangal, India kollam201@gmail.com	Mitra Koushik Bang Dept. of ECE SR Engineering College Warangal, India koushik.bang73@gmail.com	Donthanadhy Laxya Dept. of ECE SR Engineering College Warangal, India laxya19@gmail.com
Hegde Adarsh Kalyan Dept. of ECE SR Engineering College Warangal, India adarsh.hegde@gmail.com	Karte Nishu Varma Dept. of ECE SR Engineering College Warangal, India kartanishuvarma123@gmail.com	

2023 1st International Conference for Emerging Technology (ICET)
Belgaum, India, May 27-29, 2023

Investigation on Power Supply Scaling Effects on the Performance of PET/NET TSPC-DATA-Flip Flops at Wide Range of Operating Temperatures

Nagavathi Tarun Teja ECE Department SR University Warangal, India tejanagavathi1313@gmail.com	Kondrappa Karthikya ECE Department SR University Warangal, India karthikya.kondrappa@gmail.com	J. Ajayn ECE Department SR University Warangal, India emilajayn@gmail.com
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Telugu Optical Character Recognition Using Deep Learning

Gule Suresh M.Tech Student, Dept. of ECE SR University Warangal, India sureshgule@gmail.com	Ch. Rajendra Prasad Dept. of ECE SR University Warangal, India chrajendra201@gmail.com	Sreedhar Kollam Dept. of ECE SR University Warangal, India kollam201@gmail.com
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2023 International Conference on Recent Trends in Electronics and Communication (ICRETEC)
Giza, Egypt, Jan 19-20, 2023

Detection Of MRI Brain Tumor Using Customized Deep Learning Method Via Web App

Alaka Shrivastava Dept. of ECE SR Engineering College Warangal, India shrivastava101@gmail.com	Bhobli Varadha Reddy Dept. of ECE SR Engineering College Warangal, India varadha.bhobli201@gmail.com	Kanuri Balakrishna Dept. of ECE SR University Warangal, India kanuri.balakrishna1@gmail.com
Vallabha Akshitha Dept. of ECE SR Engineering College Warangal, India vallabha.akshitha201@gmail.com	Sreedhar Kollam Dept. of ECE SR University Warangal, India kollam201@gmail.com	Ch. Rajendra Prasad Dept. of ECE SR University Warangal, India chrajendra201@gmail.com

2023 International Conference for Advancement in Technology (ICATAT)
Giza, Egypt, Jan 19-20, 2023

Classification of Human Activities using CNN with Principal Component Analysis

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