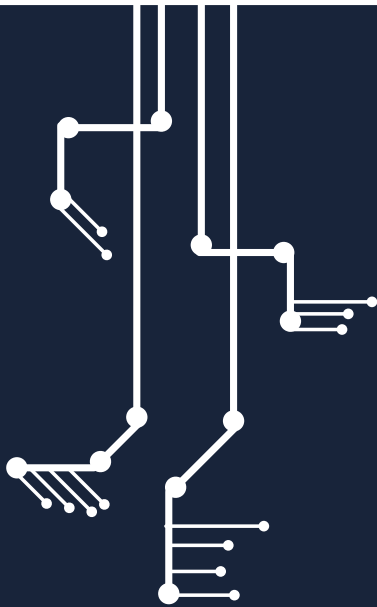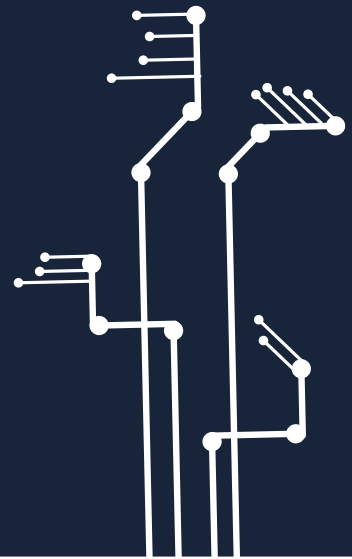# NEW HORIZON
COLLEGE OF ENGINEERING

THE NEURAL CHRONICLES

AI
ML

Message From Principal

It gives me great pleasure to give my best wishes to the editorial committee of the Department of Artificial Intelligence and Machine Learning, New Horizon College of Engineering. The students and faculty of the department are always proactive in taking initiative in all kinds of events. I congratulate all the achievers, contributors, and students for bringing out such an informative newsletter. I hope this newsletter reflects all activities of the department and inspires others to do their best.

Thanking you,
Regards

~Dr. Manjunatha

✦✦✦

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Letter From The HOD

Greetings to all !!

Learning through expression and awareness is vital for development and helps in assessment of the progress of curriculum and integrated environment of passion and skills. This is the fourth issue of 'The Neural Chronicles'.

I take this opportunity to appreciate the collective efforts of students, faculties and department AI & ML to have done a great job in achieving heights. The department encourages more activities towards excellence and working on technology based labs and drawing insights into Deep learning techniques, IOT and many others. This newsletter shows the journey of the department to industrial visits, technical learning, art submissions and achievements of the department.

I wish the team great success and much more to strive for.

With best wishes,
Dr N V Uma Reddy
Professor and Head
AI& ML , NHCE

✦ ✦ ✦

About The Department

The Department of Artificial Intelligence and Machine Learning at New Horizon College of Engineering was established circa 2020, and it offers a program at the UG level. The institution in all its grandeur is accredited by National Board of Accreditation (NBA) and by The National Assessment and Accreditation Council (NAAC) with the coveted "A" grade.

Artificial Intelligence is consistently clawing itself deeper into various industries and possesses great potential in the current market. It would be best described as an amalgamation of Data Science and Machine Learning. For the average Joe, Data is an elephantine amount of information with great scope for elaborate analytics.

The department of AI&ML here at NHCE quintessentially focuses on the five pillars of AI technology- Data Science, Machine Learning, Deep Learning, Big Data Analytics, and Visualization & Deployment of the predictive model. The caliber of any department is intrinsically defined by the professors it nourishes. Our department boasts a competent fraternity of ardent, motivated, and experienced professors striving to equip their students with the skills to provide smarter solutions to the problems, existing and forthcoming. Paving the way for a brighter future, in the modern world.

...

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VISION AND MISSION

WORKSHOPS AND IVs

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FACULTY PUBLICATIONS & ACHIEVEMENTS

EDITORIAL COMMITTEE

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✦ ✦ ✦

Vision And Mission

Vision:

To develop an outstanding AI and ML professionals with profound practical, research & managerial skills to meet ever changing Industrial Social and Technological needs of the Society.

Mission:

- To disseminate strong theoretical and practical exposure to meet the emerging trends in the industry.
- To promote a freethinking environment with innovative research and teaching-learning pedagogy.
- To develop value based socially responsible professionals with high degree of leadership skills will support for betterment of the society.

✦✦✦

WORKSHOPS

DEEP LEARNING TECHNIQUES

An FDP entitled "Deep Learning Techniques" was held on 25th February 2023 by the Department of Artificial Intelligence and Machine Learning in association with Quality Assurance and Skill Development Centre at the IBM lab. The speaker, Mrs.Priyanka Kanupuru, resource person of the FDP and also a Data Scientist was warmly welcomed by Dr. N. V. Uma Reddy HOD, AIML who also inaugurated the FDP by welcoming all the distinguished guests that included Dr. Sanjeev Sharma, Dean QASDC, resource person, and the participants of the FDP. The resource person was felicitated with a small token of appreciation by Dr. Sanjeev Sharma.

✦ ✦ ✦

The FDP provided insights into Deep Learning Techniques, Tools, and Algorithms that can be used for processing large image datasets followed by a hands-on session in which participants implemented different algorithms for generating the dataset as well as processing it. The resource person gave valuable inputs on various deep learning applications that are used in the industry. She also shared her experience of an industry project where deep learning was used for defect detection in products.
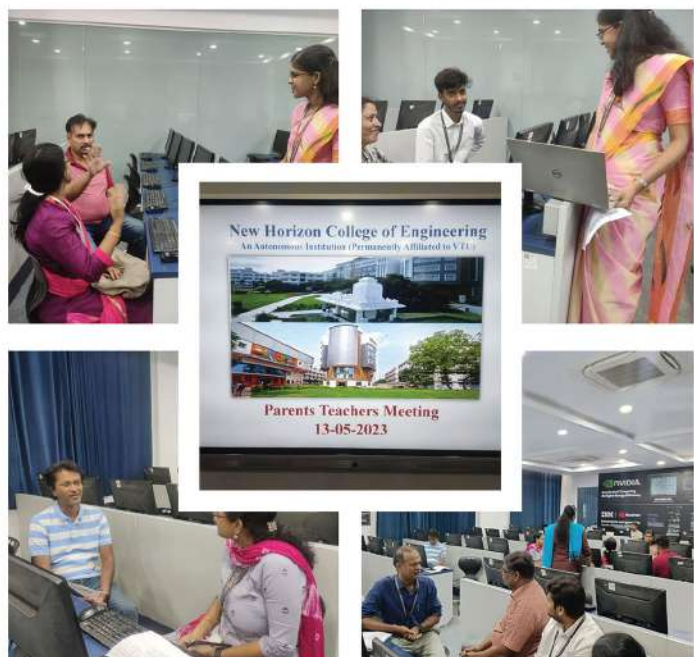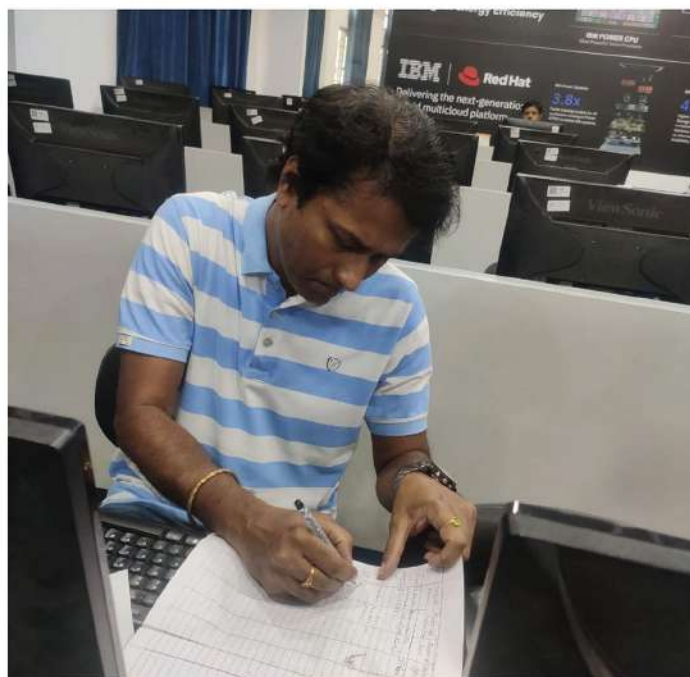

The participants got a very good insight into deep learning algorithms and their applications. The FDP was concluded by a valedictory function in which participants gave their valuable feedback highlighting how content they were with the FDP. Finally, a vote of thanks was proposed by the HOD, AIML

Parent-Teacher Meeting at IBM Lab: Strengthening the Bond Between Home and Academia

Date: 13th May 2023

The Department of Artificial Intelligence & Machine Learning held its second Parent-Teacher Meeting on 13th May 2023 at the IBM lab, fostering collaboration between parents, teachers, and students. Dr. NV Uma Reddy, the Head of the Department, provided an inspiring overview of the department's activities and academic excellence. The meeting showcased a diverse range of cutting-edge research and student projects.

An interactive Q&A session addressed parent's queries, leaving them content and assured. Parents expressed gratitude and engaged in personalized mentor sessions to strengthen the support system for students. The event created a strong community of parents and educators, leaving all participants eager for future interactions and academic growth.

New Horizon College of Engineering
An Autonomous Institution (Permanently Affiliated to VTU)

Parents Teachers Meeting
13-05-2023

MARCH 2&3 - DEEP LEARNING WORKSHOP

On 2nd and 3rd March 2023, the students of AIML Department had the privilege of attending a virtual workshop conducted in association with AI QUANTUM SMART SOLUTIONS PRIVATE LIMITED and led by the esteemed Dr. Shyam Lal, Dr. Anand Kumar and Mr. Amit Kumar, who was graceful enough to impart their knowledge on the topic ,"Machine Learning and Deep Learning architecture with applications".

The workshop was inaugurated by our beloved HOD, Dr.N.V. Uma Reddy, which put the students, who were in an unfamiliar environment, at ease.

✦ ✦ ✦

The workshop was kicked off with the Basics of Deep Learning and related math concepts and was succeeded by a session on CNN architecture and its applications. This enabled the students to appreciate the real life uses of Deep Learning in fields such as fake news detection on social media and processing healthcare datasets, which of course was performed by the students giving them a hands-on experience.

As the session concluded, the students were left wanting more. It also made them realize they had just scratched the surface of Deep Learning and background math concepts which inspired them to dig deeper. An experience like this is sure to go a long way in shaping the thought process of the future leaders of the ML industry.

✦✦✦

IBM Power9 Processor System

An FDP entitled "IBM Power9 Processor System" was held on 16th February 2023 by the Department of Artificial Intelligence and Machine Learning in association with Industry Institute Interaction Cell. The resource person of the FDP, is Mrs.Sri Kamani, a Technical Manager at Object Automation System Solutions Pvt Ltd, and Mr.Shiva System Administrator, at Object Automation Pvt Ltd. The FDP was inaugurated by Dr. N. V. Uma Reddy HOD, AIML who also welcomed all the distinguished guests Dr.Sanjeev Sharma, Dean QASDC, Mr.Binod Kumar Singh, Head IIC and Corporate Relations, Mr.Tarun Batra, Chief Operating Officer, resource persons and participants of the FDP.

✦ ✦ ✦

The resource persons were honored by Dr. N.V. Uma Reddy, HOD-AIML, and Dr. Sanjeev Sharma, Dean QASDC, during the Faculty Development Program (FDP).

The FDP provided insights into IBM Server management, including establishing server connections, user creation, permission assignment, and application operation. Participants engaged in hands-on learning using Mobacterm, applying concepts covered in the FDP.

Furthermore, the program offered insights on database access and visualization in Jupyter Notebook. The FDP concluded with a valedictory function where participants shared feedback, and Dr. N.V. Uma Reddy extended thanks to all for their contributions.

This FDP not only enhanced technical skills but also fostered collaboration and a commitment to excellence in AIML. We look forward to more such enriching opportunities in the future, driving continuous growth and learning in our academic community.

DEFUSION EVENT

The students of the AIML Department were thrilled to learn that their department's Brainiacs Club was organising the Defusion event on 26th June, providing them a platform to test their knowledge in the AI related fields.The event began with a round of quiz on AI&IT related topics. The time-based format compelled the students to be on their toes, ensuring that the one with quickest thinking and highest accuracy was the champion. The round was a hit with the participants who were evidentally enthused and involved while answering the questions.

✦ ✦ ✦

The next round gave a chance for the technically gifted to shine, wherein they has to recreate AI inspired images using prompts and the instructions provided. The participants put their best foot forward as they showcased their exemplary commitment to perfectly match the given image using their prompts.

At the end of this well-fought battle, inevitably only some could be called winners. However, it was quite evident that for the participants the experience was as good a prize as any. The camaraderie and intellectual exchange in the course of this contest was a delightful sight.

Industrial Visits

INDUSTRIAL VISIT 5th SEM-BEML

An Industrial Visit, in its essence, is arguably the best way to foster a deeper understanding of concepts, to bridge the gap between theoretical knowledge and its practical implementation for an emerging engineer. To inculcate just that, the Department of AIML organised an Industrial Visit to BEML on the 20th of December, 2022 for the students of the 5th semester.

✦ ✦ ✦

BEML, a public sector undertaking, manufactures Indian Rail Coaches and their spare parts. The industrial visit commenced with a training session by skilled instructors present on-site. This gave students an insight on the different sectors involved in the manufacturing, assembly and deployment procedures of Rail equipment.

Students were able to brainstorm on the possible involvement of Artificial Intelligence that can be advantageous in this sector. Overall, the visit to BEML proved to be an outstanding success, with students soaking in a valuable practical experience.

✦ ✦ ✦

APICULTURE

Department of AI &ML has taken a initiative to conduct industirial vist for 3rd semester students(Batch 2021). They have explained how the bee keeping industry plays an important role in increasing yield of crop through pollination. The students were taken to industry of Prashanth Organics,Batlahalli, ChintamaniTaluk, Chikkaballapur district. The event was conducted on 11th February from 11:00 AM to 4:30 PM by Ms.Sonia Maria D'souza, Senior Assistant Professor.

✦✦✦

STPI IOT LABS

On July 11, 2023, 120 enthusiastic 4th-semester AIML students, accompanied by four faculty members, embarked on an educational expedition to the 'Software Technology Parks of India (STPI)' in Electronic City, Bangalore. This autonomous society, backed by the Indian government, is dedicated to promoting startups and facilitating product exports from India. On July 11, 2023, 120 4th-semester AIML students and four faculty members visited the Software Technology Parks of India (STPI) in Bangalore, to gain firsthand exposure to IoT labs, cutting-edge equipment, and web server testing certification, expanding their knowledge and igniting inspiration for further exploration in this dynamic field.

✦ ✦ ✦

STUDENT
ACHIEVEMENTS

★ ★ ★

Student Achievements

**Jayavibhav NK
[1NH20AI035]**
Hackzon 2022 NHCE - 1st
Place
Builders' Camp
Hackathon - 2nd Place
ISTE Student Chapter -
Best Performing Student
UDAAN 2023 -
Participant

**Dharshan AN
[1NH20AI026]**
Hackzon 2022 NHCE - 1st
Place
Builders' Camp
Hackathon - 2nd Place
UDAAN 2023 - Participant

Student Achievements

Manish K
[1NH20AI038]

Hackzon - 1st Place
RVIT Hackathon - 1st Place
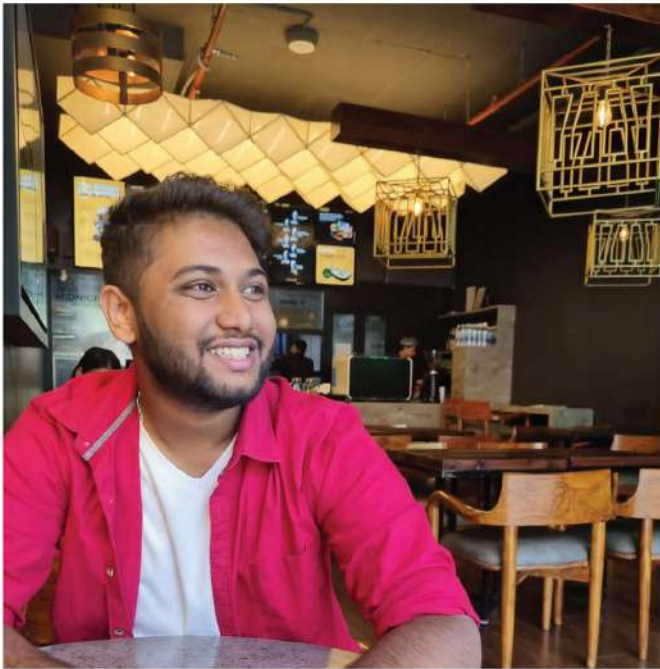**Participated in UDAAN**
2023

Sai Tejeshwar
[1NH21AI063]

UDAAN 2023 - Best
Elevator Pitch - FInalist

★ ★ ★

Student Achievements

**Krish Aryan
[1NH21AI046]
Chatwise UK Pvt Ltd. -
Internship
Chef's Hat IIM Bangalore -
Participant
Samsung India Solve for
Tomorrow Ideathon -
Participation
Future 3.0 - Participant**

**Harshitha Ravani
[1NH21AI039]**

**Speak Up Mood Indigo IIT
Bombay - Participation
Chatwise UK Pvt. Ltd. -
Internship
Chef's Hat IIM Bangalore -
Participation
Future 3.0 - Participant**

✦ ✦ ✦

Student Achievements

**Medagam Varsha
[1NH20AI053]**

Area F2 International Speech Contest Toastmasters International - 3rd Place International Speech Contest Club level- 1st Place

**Koyal Chandresh
[1NH21AI045]**

VTU Zonal Tournament Powerlifting - 4th Place Powerlifting Fitness Club NHCE - 1st Place

✦ ✦ ✦

Student Achievements

**Jaswanth
[1NH21AI089]**

**Yogasana Championship
2022 - 2nd Place
VTU Zonal Tournament
Volleyball Men - Runners Up**

**Pranit Prakash Prabhu
[1NH20AI078]**

Hackzon - 1st Place

✦ ✦ ✦

Student Achievements

S Evengeline [1NH20AI091]

Design and Innovaton Clinic 2023 CMTI Campus - 1st Runners Up

Fizza Mirza [1NH20AI030] Charan C - [1NH20AI020] M Karthik Kumar - [1NH20AI055]

Ideathon on AI in Healthcare (Evolve.AI) 2nd Place

✦ ✦ ✦

STUDENT SUBMISSIONS

Student Submissions

Pen Sketch
Koyal Chandresh - 1NH21AI045

Egg Shell Painting
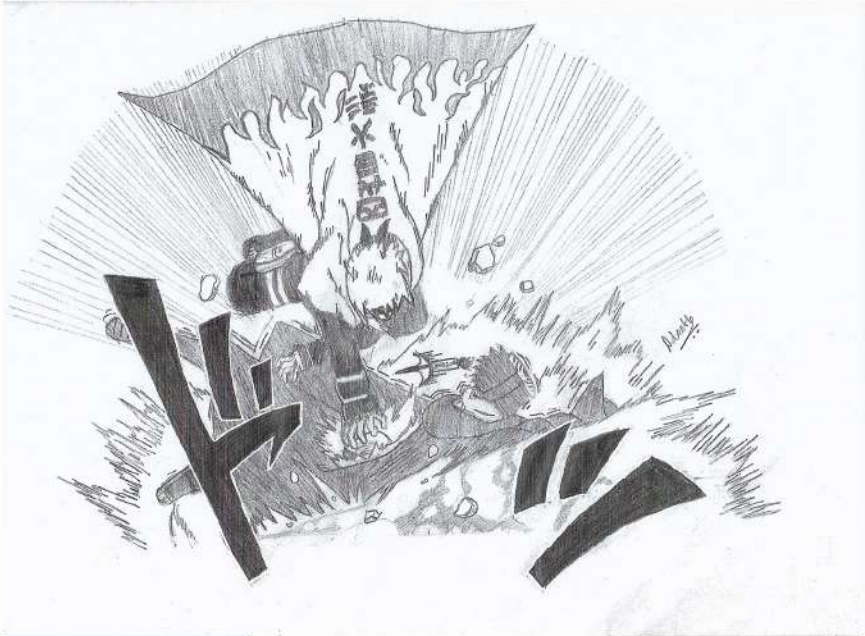Koyal Chandresh - 1NH21AI045

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Student Submissions

Pen Sketch
Boggula Yukta

Sketches
Boggula Yuktha
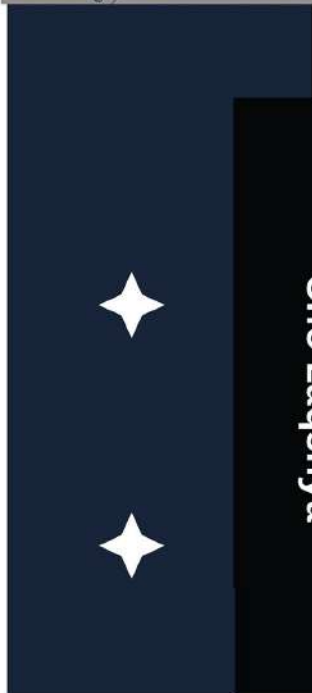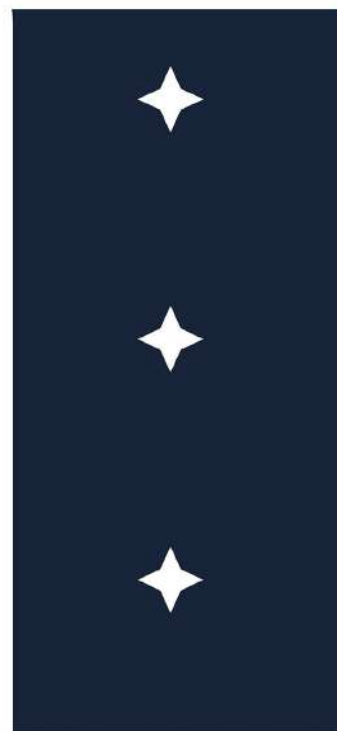
27

Student Submissions

Sketch
Adetth Raju

Sketches
Adetth Raju

進撃の巨人
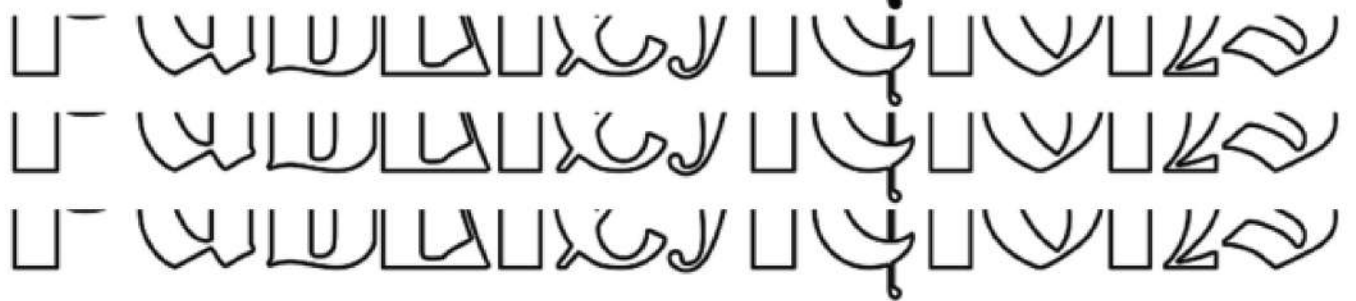attack on titan

Student Submissions

Sketch
Cho Laqshya

Sketches
Cho Laqshya

STUDENT PUBLICATIONS

Student Publications

Certificate of Publication - IJARCCE

- N Lohith Reddy
- KS Dhruva Teja
- Pavan Kumar T
- Geethika Reddy

Certificate of Publication - Dayanand Sagar College of Engineering

- Aritroo Kumar Chowdhury
- Abhishek Samar Singh

Certificate of Publication - International Journal of Scientific Research in Science and Technology

- Progyajyothi Mukherjee
- Abhishek Samar Singh
- Syed A Amir Bokhari
- Suhail Sheikh

Certificate of Publication - International Journal of Emerging Trends in Engineering ,Management and Technology

- K Sasikaran
- Linga Malleshwar
- Krishna Vamsi

✦✦✦

Student Publications

Certificate of Publication - IJSRSET

- D Hemanth
- KS Dhruva Teja
- Saketh Sreeram
- K Vamshivardhan
- Roopam Chaudhary
- Vaishavi R
- Nikhil Manne
- K Lingeshwar Balaji
- Prithiv Kumar
- K Parthasai

IEEE International Conference on Nano Electronics, Nano Photonics, Nanomaterials and Nano Technology

- Karthik Kumar
- Harsha KG
- Arun KumarS
- Priyanka R
- Teena KB
- Manjunatha S
- Ganga Benal
- Joel Praneeth
- Rohith Kumarr
- Roopam Chaudhary
- Umair Ahmed
- Neehika
- Saketh Sreeram

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Student Publications

National Conference on Digital Technologies for Smart Cities
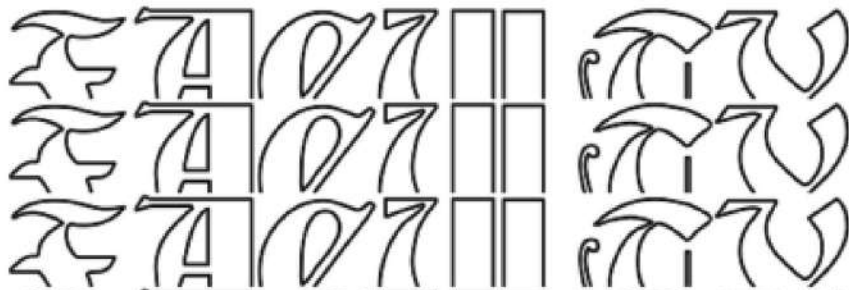
- Sooryendhu
- Vignesh Prabhu

International Journal of Scientific Research in Science and Technology - AI in advance driver assistance system
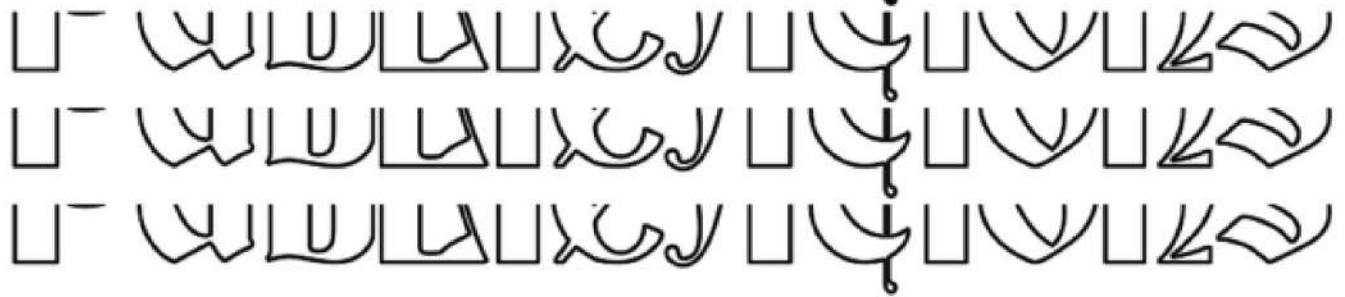
- KS Dhruva Teja

Smart Farming using Big Data

- Vibha Joshi

✦ ✦ ✦

FACULTY PUBLICATIONS

Faculty Publications

- *Energy Efficient Low Latency Routing Design for Target Tracking Applications of Wireless Sensor Network.*
  - Deepika Lokesh and Dr. N.V.Uma Reddy

- *Energy Efficient Routing Design for Target Tracking in Wireless Sensor Network.*
  - Deepika Lokesh and Dr. N.V.Uma Reddy

- *Design of a Novel T-Shaped and F-Shaped Triple-Band Operating Frequency Patch Antenna and Performance Analysis & Evaluation.*
  - Dr. N.V. Uma Reddy and Syed Ateequr Rehman

- *A Deep Learning Approach to detect the spoiled fruits.*
  - Dr. N.V. Uma Reddy and Priyanka Kanupur

- *Semantic Based Weighted Web Session Clustering Using Adapted k-Means and Hierarchical Agglomerative Algorithms.*
  - Prof. H.K. Sowmya and R.J. Anandhi

- *An efficient and scalable dynamic session identification framework for Web Usage Mining*
  - Prof. Sowmya HK and RJ Anandhi

- *Stability Results of Thermal Control System with Time-Dependent Delays and Perturbations of Nonlinearity*
  - Dagne Asefa Gemechu, K. Prabakaran , Lalithamani N, S. Nagarajan, S. Umamaheswaran, Umamageshwari. S, Meseret Leta Feyisa

- *Biodegradable sensors: A comprehensive review*
  - Dr. Sreejith S

✦ ✦ ✦

Faculty Publications

- *Advances in neuromorphic devices for the hardware implementation of neuromorphic computing systems for future artificial intelligence applications: A critical review*
  - .Ajayan D.Nirmal Binola KJebalin I.V,S.Sreejith

- *Autonomous Vehicle Traffic Recognition Based on Artificial Intelligence*
  - Dr. Sonia Maria D'Souza

- *ExpACVO-Hybrid Deep learning: Exponential Anti Corona Virus Optimization enabled Hybrid Deep learning for tongue image segmentation towards diabetes mellitus detection*
  - Jimsha K Mathew

- *Convolutional neural network based dog breed classification*
  - Jimsha K Mathew

- *A comprehensive review on graphene FET bio-sensors and their emerging application in DNA/RNA sensing & rapid Covid-19 detection*
  - Dr. Sreejith S

- *Ferroelectric Field Effect Transistors (FeFETs): Advancements, challenges and exciting prospects for next generation Non-Volatile Memory (NVM) applications*
  - Dr. Sreejith S

- *AlexNet-NDTL: Classification of MRI brain tumor images*
  - Dr. Sreejith S

- *Analysis of Covid-19 CT Chest Image Classification Using D14jMlp Classifier and Multilayer Perception in WEKA Environment*
  - Dr. Sreejith S

✦ ✦ ✦

FACULTY ACHIEVEMENTS

Faculty Achievements

Dr. N.V. Uma Reddy

Certificate of appreciation - Reva University
Letter of Appreciation - Surthy Edu tech PVT LTD
Certificate of appreciation - RV College of
Engineering association with Florida
Session Chair-IEEE International Conference -
BNMIT-VTU
Reviewer Recognition
- NITTE Meenakshi Institute of Technology

✦✦✦

Faculty Achievements

Dr. Gurupriya M

Train the Trainer - Global Logic

Dr.Sreejith S

Session Chair-IEEE International Conference - Reviewer VISAT-Ernakulam

Jimsha K Mathew

Reviewer Recognition - NITTE Meenakshi Institute of Technology

✦ ✦ ✦

Faculty Achievements

Ms.Shashikala K S

NPTEL Discipline Star Award
NPTEL Believer Award
Topper+Elite certificate from Swayam NPTEL for the subject "Introduction to database systems" - NPTEL
Silver medal+Elite certificate from Swayam NPTEL for the subject "INTERNET OF THINGS" - NPTEL
Topper+Silver medal in SWAYAM NPTEL Course Cloud Computing " - NPTEL
Certificate of Presentation (Participated and presented paper in the International Conference on Edge Computing and Applications, ICECAA 2023)- Gnanamani College of Technology, IEEE Madras Section, Madras Section AES Chapter

◆ ★ ◆

EDITORIAL COMMITTEE

STUDENT EDITORIAL COMMITTEE

Vibha

Harshitha

Krish

Nishanth

Koyal

Adetth

Lavnish

Giridharan

Yash

Aatrey

✦ ✦ ✦

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FACULTY EDITORIAL COMMITTEE

Dr. N.V. Uma Reddy

Prof. Shashikala K.S

✦ ✦ ✦

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