

## NALLA NARASIMHA REDDY

ion Society's Group of Institutions - Integrated Campu (UGC AUTONOMOUS INSTITUTION)



**SCHOOL OF ENGINEERING** 

**DEPARTMENT OF** 

**ELECTRONICS AND COMMUNICATION ENGINEERING** 

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# MECTOR

NRG EC TECHNOCRATS ORNATE REPORT







# OF

### **ELECTRONICS AND COMMUNICATION ENGINEERING**



## NNRG EC TECHNOCRATS ORNATE REPORT



# SCHOOL OF ENGINEERING DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

### INSTITUTE'S VISION AND MISSION

#### **VISION:**

 To be a premier institution ensuring globally competent and ethically strong professionals.

#### MISSION:

- To provide higher education by refining the traditional methods of teaching to make globally competent professionals.
- To impart quality education by providing the state-of-the-art infrastructure and innovative research facilities.
- To practice and promote high standards of professional ethics, transparency and accountability.

### **DEPARTMENT'S VISION AND MISSION**

#### VISION:

To produce creative Electronics and Communication
 Engineering graduates with cutting edge technology and

 Research to meet Industry and societal needs.

#### MISSION:

- To provide innovative learning environment to enable the students to face the challenges.
- To provide value-based education by promoting activities addressing societal needs.
- To enable graduates to develop the skills to solve complex problems in multidisciplinary activities.

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# 1.SALIENT FEATURES

## ABOUT ECE DEPARTMENT

Electronics is the branch of study that has revolutionized the life style of humanity. It is a pace setter and a prime mover behind the transition to a technological society. The field of Electronics and Communication Engineering encompasses all areas of human life. Radio, television, telephones, computers, automobiles, office machinery and house-hold appliances, lifesaving medical equipment and space vehicles represent a mere sample in the wide spectrum of application of Electronics.

In the age of satellite transmitted television and transcontinental computer network, the challenge and opportunities in this profession continue to mushroom. Electronics and Communication Engineering graduates have unlimited opportunities in the field of terrestrial and extra-terrestrial communication systems like telephones, cellular phones, television, optical fiber communication, consumer and entertainment devices. Highly rewarding and greatly satisfying opportunities await the Electronics and Communication Engineers in the field of satellite space programs, embedded technologies etc.

The Department of Electronics and Communication was started in the year 2009. It is a full-fledged academic department for emerging ECE engineers. B.Tech. (ECE) program was duly approved by the AICTE and affiliated to JNTU, Hyderabad. An intake of 60 was sanctioned initially and then it is raised to 180 from the year 2019. PG Program (M.Tech.) with specialization in "Embedded Systems &VLSI" is approved by AICTE for the academic year 2013-14 with an approved intake of 18. For the academic year 2024-25, there are 11 students enrolled in the booming M.Tech Program successfully.

There are 33 Faculty members in the department which includes 8 doctorates from various reputed institutions, and 12 faculty members pursuing their Ph.D. The department is equipped with 8 spacious and well-developed laboratories. Seminars, Workshops and Technical Symposia are regularly conducted in the department to keep faculty and students updated with latest developments in various fields. The department is committed to provide opportunity to embark on a rewarding and exciting learning journey in preparation for a future career.

The Electronics & Communication Engineering (ECE) Department has built a reputation for excellence in teaching and service. Electronic engineers are changing the world to a comfortable global home. The information and technology revolution has been built on the advances of Electronics.

ECE is making exhilarating progress in areas ranging from microelectronics, mobile communications to VLSI Design Automation. The students are inspired by the expertise and knowledge of our faculty, integrating practical with challenging and interesting course-work

# The software's and major Equipment that are available in the department are:

- Cadence EDA Tool
- MATLAB-2014b and Tool Boxes (Simulink, Image Processing, Communication, Signal Processing and Digital Signal Processing System)
- Spectrum Analyzer and Signal Generator
- OFDM trainer kit
- Digital Signal Processors Kits (TMS320C6713)
- MPMC COTEX M3 Kit
- Advanced RISC Machine Processor Kits (LPC2148)
- Xilinx SPARTAN 3E FPGA Boards
- Artix-7 FPGA kit, Zynq-7000 SoC kit
- Xilinx Vivado tool

## 2.DEPARTMENTAL ACTIVITIES

### 2.1 ELITE GATHERING

## 2.1.1 II YEAR ELITE GATHERING - I

#### **PURPOSE OF GATHERING:**

The Department of Electronics & Communication Engineering at Nalla Narasimha Reddy Education Society's Group of Institutions, Hyderabad, in collaboration with the college management and H&S Department, organized a one-day Elite Gathering program for B. Tech II Year, II-Semester students, with participation from all sections, on Saturday, 20th September 2025.

The Elite Gathering plays a significant role in the holistic development of students by fostering cultural awareness, promoting social interaction, and encouraging creative thinking. It provides a platform for B. Tech students to learn about Telangana's rich traditions and festivals, exchange ideas with peers and faculty, and enhance their communication and leadership skills. Such programs not only strengthen students' connection to their heritage but also contribute to building teamwork, confidence, and a vibrant institutional culture that values both academic excellence and cultural preservation.

The program focused on the theme: "Living Traditions: Telangana's Festivals in a Modern World."

The theme "Living Traditions: Telangana's Festivals in a Modern World" highlights the enduring cultural heritage of Telangana and its relevance in contemporary society. It emphasizes how traditional festivals, rituals, and customs continue to shape social values, community bonding, and regional identity even as the state embraces modernization and technological progress. The topic encourages students to appreciate the richness of Telangana's cultural practices, understand their historical significance, and explore ways to celebrate and preserve these traditions in a manner that resonates with modern lifestyles.

#### **GATHERING PARTICULARS:**

Date: 20th September, 2025 (Saturday) Venue: AuditoriumIII Floor, NNRG

Attendees: B. Tech. (ECE) II year, I-Sem A, B & C Section (12 students)



II Year ECE Students actively participating in the Elite Gathering



II ECE participants along with ECE HoD & faculty members during the Elite Gathering **NECTOR** 

#### Participants:

S. No.	Roll No.	Year & Section	Name of the Student
1	247Z1A0414	II ECE A	BANDIRALA JAVANA
2	247Z1A04C2	II ECE B	MULA AKSHAYA
3	247Z1A04H2	II ECE C	TANGALLAPALLY SRAVANTHI
4	247Z1A0444	II ECE A	DARIPELLIJOSHNAVI
5	247Z1A0481	II ECE B	KANUGANTI SANJANA
6	257Z5A0404	II ECE C	CHAMAKURA SRUTHI
7	247Z1A0426	II ECE A	BOLLEPALLY SATYANARAYANA RAJU
8	247Z1A04C8	II ECE B	NAKKA HIRANMAYEE RAJESWARI
9	247Z1A04F4	II ECE C	RESHAM RAKSHITA
10	247Z1A0410	II ECE A	BADDIPADIGA POOJITHA
11	247Z1A0477	II ECE B	KANDIKANTI HARSHA VARDHAN GOUD
12	247Z1A04F8	II ECE C	SANKURI PALLAVI
13	247Z1A04I7	II ECE C	VITTA SANDEEP REDDY

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#### **INCHARGES:**

Mr. Aravind, Assistant Professor Mrs. K. Shiva Prasanna, Assistant Professor













#### **GATHERING OUTCOME:**

- The program enhanced students' understanding of Telangana's rich cultural heritage, particularly its festivals, and highlighted the significance of preserving and celebrating these traditions in a modern world while fostering creativity and cultural pride.
- It promoted holistic development by improving communication, teamwork, and social interaction skills, providing a platform for students to engage actively, exchange ideas, and strengthen their overall personality and institutional belonging.

"Honouring our traditions today ensures they thrive in the world of tomorrow".

### 2.1.1 II YEAR ELITE GATHERING - I

#### **PURPOSE OF GATHERING:**

The Department of Electronics & Communication Engineering at Nalla Narasimha Reddy Education Society's Group of Institutions, Hyderabad, in collaboration with the college management and H&S Department, organized a one-day Elite Gathering program for B. Tech II Year, II-Semester students, with participation from all sections, on Saturday, 10<sup>th</sup> October 2025.

The Elite Gathering plays a significant role in the holistic development of students by fostering cultural awareness, promoting social interaction, and encouraging creative thinking. It provides a platform for B. Tech students to learn about Telangana's rich traditions and festivals, exchange ideas with peers and faculty, and enhance their communication and leadership skills. Such programs not only strengthen students' connection to their heritage but also contribute to building teamwork, confidence, and a vibrant institutional culture that values both academic excellence and cultural preservation.

The program focused on the theme: "From Vedas to Virtual Reality: Evolving with Ethics"

The theme "From Vedas to Virtual Reality: Evolving with Ethics" reflects the journey of human civilization from ancient wisdom to advanced technology, emphasizing the need for ethical grounding throughout. The Vedas symbolize a foundation of moral and spiritual principles, while virtual reality represents the frontier of modern innovation. As society transitions through these eras, the core values of responsibility, empathy, and truth must evolve alongside our tools. This phrase underscores that no matter how far we advance technologically, ethical consciousness must remain central to ensure progress benefits humanity as a whole.

#### **GATHERING PARTICULARS:**

Date: 10<sup>th</sup> October, 2025 (Friday) Venue: AuditoriumIII Floor, NNRG

Attendees: B. Tech. (ECE) II year, I-Sem A, B & C Section (18 students))



II Year ECE Students actively participating in the Elite Gathering

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II ECE participants along with faculty members during the Elite Gathering





M. Bhavith (247Z1A0498)

M. Akshaya (2478Z1A04C2)

#### **GATHERING OUTCOME:**

- The program enhanced students' understanding of the evolution of knowledge from ancient Vedic wisdom to modern technological advancements, emphasizing the relevance of ethical values in today's digital era and inspiring a balanced approach to innovation rooted in cultural and moral consciousness.
- It fostered holistic growth by enhancing critical thinking, ethical reasoning, and digital awareness, providing students with a platform to explore, reflect, and express how timeless principles can guide responsible behavior in a rapidly evolving technological landscape.

#### **INCHARGES:**

Mr. Aravind, Assistant Professor

Mrs. K. Shiva Prasanna, Assistant Professor



T. Sravanthi (247Z1A04H2)



P. Nandini (247Z1A04E5)

#### Participants:

S. No	Roll Number	Student Name
1	247Z1AD414	B. Javana
2	247Z1A0444	D. Joshnavi
3	247Z1AQ446	D. Nikitha
4	247Z1A0460	G. Chandu
5	247Z1AD477	K. Harsha
6	247Z1A0479	K. Shravya Sri
7	247Z1A0481	K. Sanjana
8	247Z1A0490	K. Surya
9	247Z1AD494	K. Durga
10	247Z1AD497	L. Sathwik
11	247Z1AD498	M. Shavith
12	2478Z1A04C2	M. Akshaya
13	247Z1AD4I7	V. Sandeep Reddy
14	247Z1A04E1	P. Soujanya
15	257Z51A0416	N. Swathi
16	247Z1A04H2	T. Sravanshii
17	247Z1AD4E6	R. Sai Priya
18	247Z1A04E5	P. Nandini

# "Evolving from Vedas to virtual reality, ethics must remain our guiding light.."

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### 2.1.2 ELITE GATHERING -III YEAR

#### **PURPOSE OF GATHERING:**

The Department of Electronics & Communication Engineering at Nalla Narasimha Reddy Education Society's Group of Institutions, Hyderabad, in collaboration with the college management and H&S Department, organized a one-day Elite Gathering program for B. Tech III Year, I-Semester students, with participation from all sections, on Saturday, 29 th October 2025.

The program focused on the theme: "From Protest to Progress: The Nation that Never Gave Up."

The Elite Gathering plays a significant role in symbolizing India's remarkable journey from a nation that once fought for freedom through protests and struggles to one that now moves forward with innovation, unity, and resilience. The theme reflects the transformation of courage and determination into the spirit of growth and nation-building. It reminds us of the sacrifices of our freedom fighters and how their vision continues to inspire modern India. This gathering not only celebrates our historical achievements but also encourages the youth to contribute actively toward the nation's development through education, innovation, and social responsibility. It stands as a tribute to the nation's unwavering willpower and a call to continue striving for excellence, harmony, and sustainable progress.



III Year ECE Students actively participating in the Elite Gathering



III ECE participants along with ECE HoD & faculty members during the Elite Gatheri

#### **GATHERING PARTICULARS:**

Date: 10<sup>th</sup> October, 2025 (Friday) Venue: Auditorium III Floor, NNRG Attendees:B.Tech.(ECE) III year, I-Sem A, B & C Section (10 students)

#### **INCHARGES:**

Mr. Aravind, Assistant Professor Mrs. K. Shiva Prasanna, Assistant Professor

#### Participants:

5. No	Roll Number	Student Name
1	237Z1A0413	B. Mythri
2	237Z1A04C5	N. Vaishnavi
3	237Z1A0466	G. Chandana
4	237Z1A0430	Ch. Praneetha
5	237Z1A04C6	N. Kavya
6	237Z1A0434	Ch. Valshnavi
7	237Z1A0456	G. Keerthi
8	237Z1A04A4	L. Keerthana
9	237Z1A0415	B. Sravya
10	2377140480	K. Asmitha

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#### CH. PRANEETHA (237Z1A0430)





Elite Gathering
Bu at Public Speaker

Majarquela, Telarquela, India

Section of the Control of t

K. ASMITHA (237Z1A0480)

B. SRAVYA (237Z1A0415)



G. KEERTHI (237Z1A0456)

CH. VAISHNAVI (237Z1A0434)

#### **GATHERING OUTCOME:**

- The program inspires citizens, especially youth, to transform the spirit of resistance and determination into constructive efforts that promote innovation, unity, and national growth.
- It creates awareness about India's historical struggles and achievements, reminding everyone that perseverance and unity are the true foundations of progress..

"From every protest we found our purpose, and through every struggle we shaped our progress."

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## 2.21NDUSRTIAL VISIT

10th September, 2025

Indian Meteorological Department (IMD), Begumpet, Hyderabad



#### **Purpose of Visit:**

The Department of Electronics and Communication Engineering at Nalla Narasimha Reddy Education Society's Group of Institutions organized an industrial visit for second-year IIB.Tech ECE C students on September 9, 2025. The visit was to the India Meteorological Department (IMD) in Begumpet, Hyderabad, and was accompanied by ECE faculty members Mrs. Madhavi K., Assistant Professor and Mr. B.Saidulu, Assistant Professor.



A Group Photo taken before commencing from college

The primary goal of the visit was for students to gain a practical understanding of how meteorological services function. This included learning about weather monitoring and forecasting techniques, as well as the technology used in these services. The specific objectives were to:

- Understand the working principles of meteorological instruments and observation techniques.
- Gain knowledge of weather forecasting methods that use radar, satellites, and numerical models.
- Explore IMD's role in disaster management, aviation, agriculture, and public safety.

#### **Sections Visited:**

Students toured three main sections at the IMD, gaining insights into different aspects of weather forecasting and monitoring.

- Radiosonde-Radiowind (RS/RW) Section: This section focuses on studying the upper atmosphere, up to 20–30 km above the ground. Students learned that large balloons filled with hydrogen or helium carry lightweight instruments called radiosondes. As the balloon rises, the radiosonde measures temperature, pressure, humidity, and wind speed, transmitting this data back to the ground. These observations are performed twice a day, at 0000 UTC and 1200 UTC, to provide consistent global data.
- Radar and Communication Section: The visit included a demonstration of the Doppler Weather Radar installed in Hyderabad. Unlike standard radars, which only show rainfall, Doppler radar uses the Doppler effect to also detect the movement and speed of weather systems. This is critical for tracking cyclones, thunderstorms and heavy rainfall in real time. Students learned that the information from these radars is crucial for issuing short-term forecasts and warnings. The communication unit explained how these warnings are quickly sent out via media, SMS, and online platforms.
- Surface Observatory Section: In this section, students observed how meteorologists create short- and medium-range forecasts. They saw how data from various sources, including surface observatories, Doppler radars, satellites, and upper-air balloons, are processed using advanced numerical weather prediction (NWP) models. The section also covered earthquake monitoring and how it is integrated with disaster alert systems.



A Group Photo taken at IMD with Officials



Glimses of Industrial Visit

#### **Attendees:**

B. Tech. ECE II yr I sem. C Section (61 Students) and 2 faculty members

#### **Outcomes of the Visit:**

At the end of the visit, the students learned

- 1. How meteorological instruments and observation techniques work.
- 2. The students learned how to predict the weather using radar, satellites, and numerical models.
- 3. The IMD's role in managing disasters, flying, farming, and keeping the public safe.

A individual feedback was taken from every student attended the visit, through a Google Form link and a consolidated feedback report was prepared to make the outcome of the industrial visit purposeful.



B. Tech. ECE II yr I sem. Section A (62 Students) and 2 faculty members

#### **Purpose of Visit:**

The Department of Electronics & Communication (ECE) Engineering in association with Industry Institute Interaction Cell (IIIC), Institute of Electrical & Electronic Engineers (IETE) Student Forum (ISF) of Nalla Narasimha Reddy Education Society's Group of Institution, and e-SPARK had organized an 'Industrial Visit' to —INDIAN METEOROLOGICAL DEPARTMENT(IMD)" located at Begumpet, Hyderabad for the IIyear B.Tech. ECE students on 11thSeptember, 2025 accompanied by ECE faculty members Dr S Rekha, Associate Professor and Mr. K Srinivas, Assistant Professor.



operating under the Ministry of Earth Sciences, Government of India. The purpose of the visit was to understand the functioning of weather monitoring, forecasting techniques, and the technological infrastructure used in meteorological services.

A Group Photo taken before commencing from college

#### **Objectives of the Visit:**

- 1. To understand the working principles of meteorological instruments and observation techniques.
- 2. To gain knowledge of weather forecasting methods using radar, satellite, and numerical models.
- 3. To explore the role of IMD in disaster management, aviation, agriculture, and public safety.

#### **Sections Visited:**

Students toured three main sections at the IMD, gaining insights into different aspects of weather forecasting and monitoring.

**Radiosonde-Radiowind (RS/RW) Section:** This section focuses on studying the upper atmosphere, up to 20–30 km above the ground. Students learned that large balloons filled with hydrogen or helium carry lightweight instruments called radiosondes. As the balloon rises, the radiosonde measures temperature, pressure, humidity, and wind speed, transmitting this data back to the ground. These observations are performed twice a day, at 0000 UTC and 1200 UTC, to provide consistent global data.

Radar and Communication Section: The visit included a demonstration of the Doppler Weather Radar installed in Hyderabad. Unlike standard radars, which only show rainfall, Doppler radar uses the Doppler effect to also detect the movement and speed of weather systems. This is critical for tracking cyclones, thunderstorms and heavy rainfall in real time. Students learned that the information from these radars is crucial for issuing short-term forecasts and warnings. The communication unit explained how these warnings are quickly sent out via media, SMS, and online platforms.

**Surface Observatory Section:** In this section, students observed how meteorologists create short- and medium-range forecasts. They saw how data from various sources, including surface observatories, Doppler radars, satellites, and upper-air balloons, are processed using advanced numerical weather prediction (NWP) models. The section also covered earthquake monitoring and how it is integrated with disaster alert systems.



An Official explaining the Surface Observatory System



An expert handling Session on Doppler weather RADAR





An expert from IMD explaining the Forecasting and Seismology section



A Group Photo taken at IMD with Officials

#### **Outcomes of the Visit:**

At the end of the visit, the students have learnt

- 1. Working principles of meteorological instruments and observation techniques.
- 2. The weather forecasting methods using radar, satellite, and numerical models.
- 3. The role of IMD in disaster management, aviation, agriculture, and public safety.

A individual feedback was taken from every student attended the visit, through a Google Form link and a consolidated feedback report was prepared to make the outcome of the industrial visit purposeful.



B. Tech. ECE II yr I sem. Section B (54 Students) and 2 faculty members

#### **Purpose of Visit:**

The Department of Electronics & Communication (ECE) Engineering in association with Industry Institute Interaction Cell (IIIC), Institute of Electrical & Electronic Engineers (IETE) Student Forum (ISF) of Nalla Narasimha Reddy Education Society's Group of Institution, and e-SPARK had organized an 'Industrial Visit' to —INDIAN METEOROLOGICAL DEPARTMENT(IMD)" located at Begumpet, Hyderabad for the IIyear B.Tech. ECE students on 11thSeptember, 2025 accompanied by ECE faculty members Dr S Rekha, Associate Professor and Mr. K Srinivas, Assistant Professor.



Sciences, Government of India. The purpose of the visit was to understand the functioning of weather monitoring, forecasting techniques, and the technological infrastructure used in meteorological services.

operating under the Ministry of Earth

A Group Photo taken before commencing from college

#### **Objectives of the Visit:**

- 1. To understand the working principles of meteorological instruments and observation techniques.
- 2. To gain knowledge of weather forecasting methods using radar, satellite, and numerical models.
- 3. To explore the role of IMD in disaster management, aviation, agriculture, and public safety.

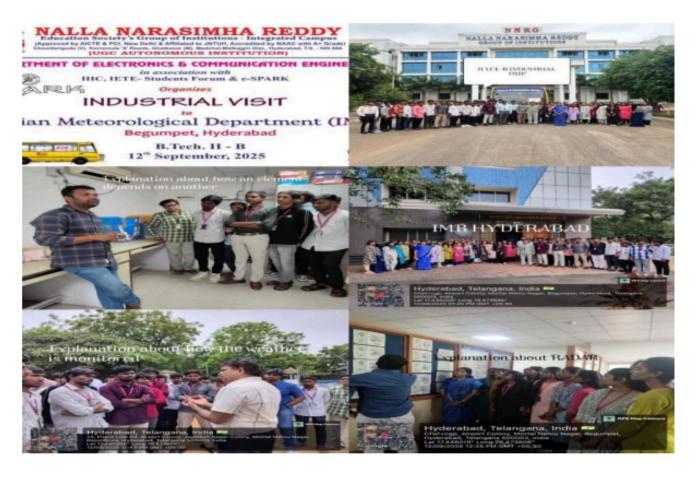
#### **Sections Visited:**

Students toured three main sections at the IMD, gaining insights into different aspects of weather forecasting and monitoring.

**Radiosonde-Radiowind (RS/RW) Section:** This section focuses on studying the upper atmosphere, up to 20–30 km above the ground. Students learned that large balloons filled with hydrogen or helium carry lightweight instruments called radiosondes. As the balloon rises, the radiosonde measures temperature, pressure, humidity, and wind speed, transmitting this data back to the ground. These observations are performed twice a day, at 0000 UTC and 1200 UTC, to provide consistent global data.

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**Surface Observatory Section:** In this section, students observed how meteorologists create short- and medium-range forecasts. They saw how data from various sources, including surface observatories, Doppler radars, satellites, and upper-air balloons, are processed using advanced numerical weather prediction (NWP) models. The section also covered earthquake monitoring and how it is integrated with disaster alert systems.



A Glimpse of IMD Visit



A Group Photo taken at IMD with Officials

#### **Outcomes of the Visit:**

At the end of the visit, the students have learnt

- 1. Working principles of meteorological instruments and observation techniques.
- 2. The weather forecasting methods using radar, satellite, and numerical models.
- 3. The role of IMD in disaster management, aviation, agriculture, and public safety.

A individual feedback was taken from every student attended the visit, through a Google Form link and a consolidated feedback report was prepared to make the outcome of the industrial visit purposeful.

# 2.3 VISIT TO RK Math

#### Report on Youth Convention Visit, RK Math,

A group of 48 students from the B.Tech II & III Year section (interested students) of Department of Electronics and Communication Engineering (ECE) of NNRG, Hyderabad had attended the Youth Convention organized by the Vivekananda Institute of Human Excellence (VIHE) at Ramakrishna Math Ashram (RK Math), Domalaguda, Hyderabad.

The programme was conducted on Wednesday, 10th September 2025, at the Vivekananda Auditorium, Ramakrishna Math, Hyderabad.

The visit topic focused on youth awareness, innovation, capacity building, and human excellence inspired by the ideals of Swami Vivekananda. The agenda of the programme included keynote addresses, motivational and spiritual talks, and cultural programmes presented by VIHE students and volunteers.

The event was celebrated as a part of the 26th Foundation Day and Silver Jubilee Celebrations of VIHE and also marked the opening of the upgraded Vivekananda Auditorium. The main objective of the visit was to expose students to value-based education, leadership qualities, and holistic personality development.

Students gained valuable insights from eminent speakers on the role of youth in nation-building and innovation-driven growth.

The programme highlighted the importance of ethical living, self-discipline, social responsibility, and capacity building among young engineers. As an outcome of the visit, students received takeaways such as pens, books, and folders related to the works and teachings of Swami Vivekananda. Overall, the visit was highly informative and motivating, contributing positively to the personal and professional development of ECE students.





LIST OF ECE STUDENTS ATTENDING 'GARLANDING CEREMONY & YOUTH CONVENTION

9.NO	YEAR	SECTION	ROLL NO	NAMES
1	- 11	A	227Z1A0488	CHANDANA
2	- 11	A	227Z1A0420	PRANITHA
1		A	227Z1A0494	GHIRIGHA
4	Ti.	A	227Z1A0467	<b>GATHWIKA</b>
5	- 11	A	227Z1A0414	GRIKANTH
6	T.	A	227Z1A0411	ASHISH KUMAR
7	- i	A	227Z1A0449	VENKAT
2	- 11	A	227Z1A0412	KRISHNA CHAITANYA
	T.	A	227Z1A04	DEEKSHITHA
10	T.	A	227Z1A0424	VAIGHNAVI
11	- 11	A	227Z1A0429	KRANTHI
12		A	227Z1A0421	KEERTHANA
12	-		227Z1A8401	GRUJAN
14	-		247Z5A0414	GARIKA.
15			247Z5A0417	GHEGHANK
16	-		247Z5A0405	K.ADHI
17	- 11		247A5A0402	D.RAJEEV
12	-		247Z5A0415	T.PRASHANTH
19	-		247Z5A0410	K.SAI MURALI
20	-		247Z5A0425	GIRI BABU
21	-	<b>Q</b>	247Z5A0411	MD.MOHIN
22	-	0	227Z1A04	MYTHRI
22	-	A	227Z1A0424	KALYANI
24	-	A	227Z1A0425	GANJAY
25	- 111	A	227ZA10401	ABHISHEK
26	-	A	227ZA10427	RAVITEJA
27	-	A	227ZA10402	GAIKUMAR
22	- 111		227Z1A0421	K. RAMYA
29	=		227Z1A0441	D. YASHWANTH
20	=		227Z1A0429	D. YASWANTH
21	=	2	227ZA10470	K.PRABAD
22	=		227ZA10467	J.VENU
22	=		227ZA10462	J.SAI CHANDANA
24	=	2	227ZA10471	KINDHU
25	=		227ZA10492	GRAVIKA
26	=		227ZA10412	BHAVYA
27	=	2	227ZA10475	SAI NIHITHA
22	=	2	227ZA10421	RAMYA
29	=	2	227ZA10408	DHARANI
43	=	2	227ZA10428	GHIVANI
41	=	۰	227Z1A84D4	NANDHITHA
42	=	0	227ZA104H5	GRINIJA.
42	=	0	227ZA10452	GAINKHIL
44	=	۰	227ZA104G7	KARTHIKEYA
45	-	0	227ZA104H	KARTHIK
46	ш	۰	227ZA104G2	YAKUE PASHA
47	=	0	227ZA104E2	RAKESH
42	=	0	227Z5A0414	KIRAN KUMAR

# 2.4 VISIT TO NGRI



#### Short Report on Visit to CSIR-NGRI Day

A group of IV ECE students and faculty visited CSIR-National Geophysical Research Institute (NGRI), Hyderabad on the occasion of CSIR-NGRI Open Day held on 26 September 2025. The visit aimed to provide practical exposure to geophysical sciences and to create awareness about ongoing research activities at NGRI. During the visit, participants explored various exhibition stalls and working models related to earth's interior, earthquakes, seismic waves, plate tectonics, and natural resource exploration. Scientists and research scholars from NGRI explained complex geophysical concepts in a simple and interactive manner, enhancing the learning experience. Live demonstrations and scaled models helped students understand real-world applications of geophysics in disaster mitigation, mineral exploration, groundwater studies, and environmental monitoring. The interaction session encouraged students to ask questions and gain insights into research careers. Overall, the visit was highly informative and inspiring, bridging the gap between theoretical knowledge and practical research, and motivating students toward scientific inquiry and innovation in geosciences.





# 2.5 GUEST LECTURE

#### **GUEST LECTURE REPORT**

Guest Lecture was conducted by the department of ECE in association with NIKROS (NNRG Innovation Knights of ROboticS) club on 31-10-2025 from 2.00 PM to 4.00 PM. Guest Speaker Dr V Manju Latha, Research and Academic Coordinator, Soham Academy of Human Excellence, Hyderabad has taken a lecture on topic "Ideas into Action: Your Future in Robotics, IoT & Automation" for second year students in ECE Seminar Hall. She has delivered lectures in various organizations and Universities. Total of around 150 students and staff participated in this programme. The speaker explains the powerful synergy between Robotics, the Internet of Things (IoT), and Automation, fundamentally driven by Artificial Intelligence (AI) and Machine Learning (ML).



The lecture also emphasized that these integrated technologies are not just futuristic concepts but are actively driving the Fourth Industrial Revolution (Industry 4.0) across numerous sectors. i.e. Smart Manufacturing (Industry 4.0): Robots and IoT enable smart factories through Robotic Process Automation (RPA), collaborative robots (Cobots), and predictive maintenance (sensors anticipating equipment failure), Healthcare: Applications include remote and precision surgery, patient monitoring via IoT wearables, and rehabilitation robots, Logistics and Supply Chain: Automation is key in warehouse management (picking, packing, and sorting robots), real-time tracking, and the rise of autonomous delivery vehicles and drones, Smart Cities & Infrastructure: Utilizing connected systems for smart traffic management, automated waste management, and enhanced surveillance/security and Agriculture: Precision farming uses IoT sensors for soil and crop health monitoring, while agricultural robots automate tasks like planting and harvesting. The recent works on robotic projects handled by their team are discussed and finally research directions in the area of robotic technologies are shared with the participants. After her lecture the students were given time to interact with her. Students felt that the session was more informative and interactive. At the end of the guest lecture, few students gave their feedback, and explained how they were benefited.

## 3. INSTITUTIONAL EVENTS

"Industry Institute Interaction (IIIC) and Institution's Innovation Council (IIC)"

October 27TH, 2025

# 3.1 GRADUATION DAY



A Report on Graduation Ceremony The 1st Graduation Ceremony of NNRG was held on October 27, 2025, at 9:00 AM on the NNRG Campus. The ceremony celebrated the academic achievements of graduating students in the presence of parents, faculty, and management. It marked the successful completion of their studies and the beginning of a new professional journey. The event was conducted in a dignified and joyful atmosphere.

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# 3.2 ENGINEER'S DAY

# REPORT ON ENGINEERS' DAY:

Engineers' Day was celebrated on 15th September 2025 with active participation from II, III, and IV year ECE students. Technical events such as Circuitronix and a Technical Quiz were conducted, encouraging problem-solving and technical knowledge. The program was successfully organized with enthusiastic student participation









**06TH OCTOBER 2025** www.nnrg.edu.in

# 3.3 MEMORANDUM OF UNDERSTANDING (MOU)



Memorandum of Understanding (MoU) was signed between Nalla Narasimha Reddy Education Society's Group of Institutions (NNRESGI), Hyderabad and the Indian Railways Institute of Signal Engineering & Telecommunications (IRISET), Secunderabad, and came into effect from 06 October 2025. The MoU aims to strengthen collaboration in the areas of training, academics, research, and skill development. Under this agreement, both institutions will jointly offer short-term certification courses, faculty development programmes (FDPs), industrial training, and hands-on laboratory exposure, particularly in the domains of Railway Signalling, Telecommunications, and ATP–Kavach systems. The MoU also promotes faculty exchange, sharing of training facilities, joint workshops, and collaborative research activities. The agreement is valid for an initial period of five years, with provisions for renewal, confidentiality, intellectual property rights, and mutual coordination through a designated committee. Overall, the MoU is expected to enhance industry-oriented education, research collaboration, and practical skill development for faculty and students of NNRESGI in association with IRISET

### 4. FACULTY ACHIEVEMENTS

# 4.1 FACULTY R & D ACHIEVEMENTS 2025-26

#### **Conferences:**

- 1. **Suresh Nalla,** V Divakar Naidu, A.V.H Sai Prasad, Prakash Babu Pentamala, Mallula Praveen Kumar, Thatiparthy Pavani. "Performance Evaluation of Hybrid Quantum Classical Algorithms Versus Traditional AI Models". In 2025 9th International Conference on IoT in Social, Mobile, Analytics and Cloud (I-SMAC), Tribhuvan University, Purwanchal Campus, Nepal, 8-10 October, pp. 735-741. IEEE (**Presented**)
- 2. **Radha S,** P Nagabushanam, Kalagotla Chenchireddy, Nara Kavya, Vasanth K, Rekha S "Design and Implementation of Class-E Power Amplifiers for GSM (n8) and Wi-Fi (n79) Bands in the Sub-6 GHz Range". In 2025 2nd International Conference on Electronic Circuits and Signaling Technologies (ICECST-2025), Lincoln University, Malaysia, 23-25 October, pp. 312-317. IEEE (**Presented**)
- 3. **K. Madhavi** "Hybrid Cloud-based Image Processing and AI Model for Real-Time Kidney Stone Prediction in Healthcare Systems". In 2025 10th International Conference on Communication and Electronics Systems (ICCES 2025), PPG Institute of Technology, Coimbatore, 28-30 October, IEEE (**Presented**)

#### **Books / Book Chapter**

1. **Rekha S**, G Shine Let, S Radha, R Balamanikanta "Design and Investigations on Conformal Vivaldi Antenna for Wireless Capsule Endoscopic System", Smart Electronics Devices and Models for Healthcare Systems (1st ed.). CRC Press, October 2025, pp. 253-272.

Scopus. DOI: https://doi.org/10.1201/9781003560296

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# 4.2 FACULTY DEVELOPMENT PROGRAMS

13/11/2025

Sept 2025- Oct 2025 Achievements-Faculty Participation

S.NO	NAME OF THE FACULTY	TITLE	PLACE/ORGANISATION	DATE(S)
1	MR. YESURAJU SATHISH	NEXT GENERATION SEMICONDUCTOR TECHNOLOGIES: DESIGN, MATERIALS AND APPLICATIONS (AICTE ATAL)	VIMAL JYOTHI ENGINEERING COLLEGE CHEMPERI KANNUR KERALA	27-10-2025 TO 01-11-2025
2	MRS. N LAVANYA	APPLICATIONS OF R, PYTHON & BIBLIOMETRIC TOOLS IN RESEARCH WITH SYSTEMATIC LITERATURE REVIEW (AICTE ATAL)	MCC BOYD TANDON SCHOOL OF BUSINESS	27-10-2025 TO 01-11-2025
3	MRS. SHIVA PRASANNA KANNAGULLA	OPTIMIZING NEXT-GEN COMPUTING FOR SMART SYSTEM DEVELOPMENT (AICTE ATAL)	NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL	13-10-2025 TO 18-10-2025
4	MS. DEEVI BINDU TUSHARA	OPTIMIZING NEXT-GEN COMPUTING FOR SMART SYSTEM DEVELOPMENT (AICTE ATAL)	NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL	13-10-2025 TO 18-10-2025
5	MS. DEEVI BINDU TUSHARA	NXT-GEN ELECTRONICS AND COMMUNICATION SYSTEMS-EMPOWERED BY ML AND AI (AICTE ATAL)	NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA	06-10-2025 TO 11-10- 2025
6	DR. REKHA SHANMUGAM	NEXT-GEN ELECTRONICS AND COMMUNICATION SYSTEMS: EMPOWERED BY ML AND AI (AICTE ATAL)	NIT KURUKSHETRA	06-10-2025 TO 11-10- 2025

7	MRS. SHIVA PRASANNA KANNAGULLA	NEXT-GEN ELECTRONICS AND COMMUNICATION SYSTEMS: EMPOWERED BY ML AND AI(AICTE ATAL)	NIT KURUKSHETRA	06-10-2025 TO 11-10- 2025
8	MS. SHETTY SRAVANTHI	NEXT-GEN ELECTRONICS AND COMMUNICATION SYSTEMS: EMPOWERED BY ML AND AI (AICTE ATAL)	NIT KURUKSHETRA	06-10-2025 TO 11-10- 2025
9	MS.SUSHMA MERCILIN	NEXT-GEN ELECTRONICS AND COMMUNICATION SYSTEMS: EMPOWERED BY ML AND AL(AICTE ATAL)	NIT KURUKSHETRA	06-10-2025 TO 11-10- 2025
10	MR. YESURAJU SATHISH	ADVANCED COMPUTING: AL DATA SCIENCE, AND GENERATIVE AI FOR RESEARCH AND EDUCATION (AICTE ATAL)	INTERNATIONAL SCHOOL OF TECHNOLOGY AND SCIENCES FOR WOMEN	22/09/2025 TO 27/09/2025
11	MS. DEEVI BINDU TUSHARA	ROLE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN SMART GRIDS (AICTE ATAL)	INDIAN INSTITUTE OF TECHNOLOGY PATNA	22/09/2025 TO 27/09/2025
12	MS. G. SOUMYA	ROLE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN SMART GRIDS (AICTE ATAL)	INDIAN INSTITUTE OF TECHNOLOGY PATNA	22/09/2025 TO 27/09/2025
13	MS. SHETTY SRAVANTHI	ROLE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN SMART GRIDS (AICTE ATAL)	INDIAN INSTITUTE OF TECHNOLOGY PATNA	22/09/2025 TO 27/09/2025
14	MS. K HEMALATHA	ROLE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN SMART GRIDS (AICTE ATAL)	INDIAN INSTITUTE OF TECHNOLOGY PATNA	22/09/2025 TO 27/09/2025
15	MRS. ANURADHA KOTAKADI	THE ROLE OF ARTIFICIAL INTELLIGENCE IN SPACE EXPLORATION: VISION, OPPORTUNITIES AND CHALLENGES FOR THE DEFENCE SECTOR (AICTE VAANI)	SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY	18/09/2025 TO 20/09/2025
16	MRS. SHIVA PRASANNA KANNAGUILA	THE ROLE OF ARTIFICIAL INTELLIGENCE IN SPACE EXPLORATION: VISION, OPPORTUNITIES AND CHALLENGES FOR THE DEFENCE SECTOR (AICTE VAANI)	SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY	18/09/2025 TO 20/09/2025

17	MR. YESURAJU SATHISH	AI-ML DRIVEN MASSIVE MIMO FOR ENHANCED 6G NETWORKS (AICTE ATAL)	SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY	15/09/2025 TO 20/09/2025
18	MRS. LAVANYA NALLA	CUTTING EDGE ADVANCES IN ARTIFICIAL INTELLIGENCE AND ATA SCIENCE (AICTE ATAL)	C.ABDUL HAKEEM COLLEGE OF ENGINEERING & TECHNOLOGY	15/09/2025 TO 20/09/2025
19	DR. REKHA SHANMUGAM	ADVANCED ANTENNA DESIGN FOR NEXT- GENERATION WIRELESS COMMUNICATION SYSTEMS (5G/6G) WITH AI PERSPECTIVES (AICTE ATAL)	MAHAKAL INSTITUTE OF TECHNOLOGY, UJJAIN	08-09-2025 TO 13-09- 2025
20	MRS. K MADHAVI	HEALTHCARE 5.0: INTEGRATING AL TINY ML & ROBOTICS FOR REAL- WORLD IMPACT (AICTE ATAL)	GOVERNMENT POLYTECHNIC, AHMEDABAD	08/09/2025 TO 13/09/2025
21	MRS. ANURADHA KOTAKADI	SMART TRANSITIONS FOR A GREENER TOMORROW: INNOVATIONS IN ENERGY AND SUSTAINABILITY (AICTE ATAL)	AUDISANKARA COLLEGE OF ENGINEERING & TECHNOLOGY	08/09/2025 TO 13/09/2025
22	MRS. ANURADHA KOTAKADI	ADVANCED VLSI DESIGN AND AL-ENABLED AUTOMATION FOR NEXT- GEN SEMICONDUCTOR MANUFACTURING (AICTE ATAL)	NRI INSTITUTE OF TECHNOLOGY	01/09/2025 TO 06/09/2025

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# 5.STUDENTS ACHIEVEMENTS

SEPTEMBER-OCTOBER 2025 MONTH ACHIEVEMENTS

## **IV-YEAR'S**

22 / 11/2025

#### September-October 2025 Month Achievements-Student's Achievements

#### Internships

S.No	Roll No and Student Name	Name of the Organization	Date(s)	Topic Name
1	227Z1A04A6 MEKALA SRUTHI	EDUSKILLS	JULY SEPT 2025	ANDROID DEVELOPER VIRTUAL INTERNSHIP
2	227Z1A04J0 YASARAM MADHAVI	EDUSKILLS	JULY SEPT 2025	AI-ML VIRTUAL INTERNSHIP
3	237Z5A0404 KOWSIK DUMMU	EDUSKILLS	JULY SEPT 2025	AI-ML VIRTUAL INTERNSHIP
4	237Z5A0408 INDRAKANTI ANU	EDUSKILLS	JULY SEPT 2025	AI-ML VIRTUAL INTERNSHIP
5	237Z5A0411 LAKKAM SRIVIDYA	EDUSKILLS	JULY SEPT 2025	AI-ML VIRTUAL INTERNSHIP
6	237Z5A0412 NALLA HARSHITHA	EDUSKILLS	JULY SEPT 2025	AI-ML VIRTUAL INTERNSHIP
7	237Z5A0414 POLE KIRAN KUMAR	EDUSKILLS	JULY SEPT 2025	EMBEDDED SYSTEM DEVELOPER VIRTUAL INTERNSHIP
8	237Z5A0415 RANGA DEEPSHIKA	EDUSKILLS	JULY SEPT 2025	AI-ML VIRTUAL INTERNSHIP
9	237Z5A0418 SHAIKKHADEER	EDUSKILLS	JULY SEPT 2025	AI-ML VIRTUAL INTERNSHIP

## **III-YEAR'S**

#### September-October 2025 Month Achievements-Student's Achievements

S.No	Roll No and Student Name	Name of the Organization	Date(s)	Topic Name
1	237Z1A04B9 M.GURUNATH REDDY	MICROSOFT	05-SEP-2025	EMBEDDED ASSESSMENT
2	237Z1A04C2 N.SAI RAM	SIMPLILEARN	08-SEP-2025	VLSI COURSE
3	237Z1A04C2 N.SAI RAM	IBM SKILLSBUILD	15-SEP-2025	INTRODUCTION TO ARTIFICIAL INTELLIGENCE
4	237Z1A04C2 N.SAI RAM	IBM SKILLSBUILD	15-SEP-2025	MACHINE LEARNING AND DEEP LEARNING
5	237Z1A04C2 N.SAI RAM	INFOSYS	15-SEP-2025	ARTIFICIAL INTELLIGENCE: TYPES OF ARTIFICIAL INTELLIGENCE
6	237Z1A04C2 N.SAI RAM	ANALYTICS VIDHYA	27-SEP-2025	INTRODUCTION TO AI & ML
7	237Z1A04B9 M.GURUNATH REDDY	ANALYTICS VIDHYA	18-OCT-2025	GENAI FOR EVERYONE

# 6.TRAINING & PLACEMENT DRIVE 6.1 OHM INSTITUTE

#### **Event Details**

• Date: 21st October 2025

• Venue: ECE Seminar Hall

• Organized by: OHM Institute ofline Mode

• Participants: III and IV Year B. Tech Students

#### **Report on GATE Awareness Program**

A GATE Awareness Program was conducted by OHM Institute for III and IV Year students on 21st October 2025. The session was organized to create awareness among engineering students regarding the Graduate Aptitude Test in Engineering (GATE) and to guide them about preparation strategies, career opportunities through GATE, and the importance of early planning

#### **Objectives of the Program**

The main objectives of the GATE Awareness Program were to: 1. Educate students about the structure and syllabus of the GATE examination. 2. Highlight the benefits of qualifying GATE, such as opportunities in higher education and PSU recruitments. 3. Provide information on study plans, time management, and online resources for GATE preparation. 4. Motivate students to begin early preparation for better results.



#### **Outcomes of the Program**

- Students gained awareness about the importance and benefits of the GATE examination.
- Participants understood the eligibility, syllabus, and exam structure.
- Students were motivated to start their preparation early.
- Information on OHM Institute's training programs and test series was shared with participants.

## 6.2 NUCLEONIX RECRUITMENT

#### **Nucleonix Systems Pvt.Ltd Placement/Internship Drive Report**

#### **Introduction:**

The Training and Placement Cell organized a placement/internship drive for Nucleonix Systems Pvt. Ltd., a reputed company specializing in the design and manufacture of Nuclear Instrumentation, Radiation Monitoring Systems, and Embedded Electronic Solutions. The drive aimed to provide final-year students an opportunity to begin their professional careers in the field of electronics, instrumentation, and embedded systems.

#### **About the Company:**

Nucleonix Systems Pvt. Ltd., headquartered in Hyderabad, is a pioneer in the field of nuclear instrumentation. Established in 1990, the company focuses on developing radiation detection and measurement instruments, nuclear counting systems, environmental monitoring systems, and training laboratory equipment for universities and research institutions



#### **Core Areas of Work:**

- Radiation Detection and Safety Instruments
- Embedded Systems and Microcontroller-Based Design
- Nuclear Physics Laboratory Equipment
- IoT-based Industrial Solutions



#### Highlights of the Drive:

- The company representatives provided an insightful pre-placement talk introducing the firm's core business areas and growth opportunities.
- Students gained a better understanding of industrial applications of electronics and radiation safety systems.
- The technical interview focused on practical knowledge and problem-solving ability related to real time embedded projects.
- The selected students were offered internships with potential for full-time placement based on performance.



HR team explaining about Recruitment Process

# Selection Process The recruitment process consisted of the following rounds:

Round	Details
IW/ritten Legt	Aptitude and Technical questions related to Electronics, Instrumentation, and Microcontrollers
Technical Interview	Questions on Embedded Systems, Microcontrollers (8051, ARM Cortex), Sensors, and Circuit Design
HR Interview	Assessment of communication skills, motivation, and career goals

#### Conclusion

The Nucleonix Systems Pvt. Ltd. placement/internship drive was a successful event, enabling students to gain access to specialized industrial domains like nuclear instrumentation and embedded systems. The Training and Placement Cell extend gratitude to the company officials for their time and support, and congratulates the selected students for their achievement.

## 7.EDITORIAL COLUMN

# 7. 1 FACULTY EDITORIAL COLUMN SWARM INTELLIGENCE

Swarm Intelligence (SI) was introduced by Gerardo Beni and Jing Wang in 1989. It refers to the use of collective behavior of multiple interacting agents—such as people, insects, or autonomous systems—to reach an optimized solution for a given problem. The term swarm denotes a group of entities working together, where each individual operates independently and contributes to problem-solving without centralized control.

Swarm intelligence is a branch of artificial intelligence inspired by the collective behavior of decentralized, self-organized systems found in nature. In such systems, simple agents like ants, bees, birds, or fish follow basic local rules. Through their interactions, complex and intelligent global behavior emerges without the presence of a central leader. Popular swarm intelligence algorithms include Ant Colony Optimization (ACO) and Particle Swarm Optimization (PSO).

Swarm intelligence algorithms exhibit notable strengths, including flexibility and robustness in dynamic and uncertain environments, the ability to find near-optimal solutions in large and complex search spaces, and inherent parallelism that enables scalability for large-scale problems. 5 Scalability is addressed through parallel computing and adaptive population resizing, which help maintain effectiveness as problem size increases

-By Mrs. K.TRISANDHYA Assistant professor ECE Department

#### Swarm intelligence can be:

Collaborative—Able to share information directly between devices. Adaptable—Able to recognize predetermined stimuli and categorize novel events. Flexible—Able to respond quickly to a variety of conditions affecting any agent in the system. Decentralized—Able to act either independently or collectively without central coordination or control. Responsive—Able to react immediately to local stimuli without latency.

**Self-organized**—Able to adopt a variety of roles as needed in response to changing conditions.

**Self-correcting**—Able to adapt and reorganize, compensating for faults and completing tasks even when individual agents fail.

**Secure**—Able to share vital insights without compromising confidentiality or privacy requirements.

However, limitations include convergence speed issues, where algorithms may require a significant number of iterations to reach satisfactory solutions, and parameter sensitivity, which can significantly impact performance. 5 There is also a risk of premature convergence, particularly if the balance between exploration and exploitation is not properly managed.

#### **Key Characteristics of Swarm Intelligence**

- Decentralized: No single agent controls the system; decision-making is distributed among agents.
- Self-organized: Global behavior emerges from local interactions rather than a predefined structure.
- Robust: The system continues to function even if some agents fail, as individuals are interchangeable.
- Scalable: Effective for problems involving a large number of variables or agents.

As a form of artificial intelligence, swarm intelligence consists of networks of endpoint devices capable of generating and processing data at the source. Relevant information that satisfies predefined conditions can be shared immediately across the network, allowing agents to make decisions locally without relying on centralized data repositories or control systems.

## 7.2 STUDENT EDITORIAL COLUMN

# Impact of Technology on IoT (Internet of Things)

#### The Rise of IoT and Smart Devices:

The Internet of Things (IoT) and smart devices are transforming how people live, work, and manage cities. With billions of connected devices worldwide, IoT has become a core driver of digital innovation across homes, industries, and public infrastructure.

#### **Smart Homes Go Mainstream:**

Smart home technology is increasingly becoming part of everyday life. Devices such as smart speakers, thermostats, lighting systems, security cameras, and AI-powered appliances enable users to control their homes remotely using smartphones or voice assistants.

#### **Key benefits include:**

- Improved energy efficiency
- Enhanced home security
- Greater convenience and automation

Wearable devices such as smartwatches and fitness trackers are also gaining popularity, helping users monitor health metrics like heart rate, sleep patterns, and physical activity.

#### **H** IoT in Industry and Smart Cities

IoT is driving major transformations beyond consumer electronics.

Industrial applications include:

- Smart factories using sensors for predictive maintenance
- Real-time production monitoring
- Reduced downtime and operational costs

#### **→** AI, Edge Computing, and Faster Connectivity

The integration of Artificial Intelligence (AI) and edge computing is significantly enhancing IoT performance. By processing data closer to the source, systems can respond faster and operate more reliably. Additionally, the expansion of 5G networks enables real-time communication between connected devices.

#### Security and Privacy in Focus

As IoT adoption grows, cybersecurity remains a critical concern. Poorly secured devices can expose users and networks to risks. To address this, governments and technology companies are strengthening security standards, implementing encryption protocols, and developing regulatory frameworks to protect data and privacy.

-Mr. M.GURUNATH REDDY 237Z1A04B9 III-ECE-B

# 8. ALMA CORNER

## 8.1 ALMA CONNECT

The Department of Electronics & Communication Engineering, School of Engineering, Nalla Narasimha Reddy Education Society's Group of Institutions, organized an Alumni Interaction Program titled "Alma Connect" on 16th September 2025 at the ECE seminar hall.

Speaker: Mr. Ibraheem (2019-2023 Batch)

The invited alumnus for the session was Mr. Ibraheem (2017-2021 Batch), currently working as an Associate Java Developer at Tech Mahindra. The session began at 2:30 PM and witnessed active participation from the

final year students of the ECE department.

**Organized by:** Nalla Narasimha Reddy Education Society's Group of Institutions – Integrated Campus

Department: School of Engineering, Department of

Electronics & Communication Engineering

**Event Name:** Alma Connect

Date: 16th September 2025 Time: 02:30 AM Venue:

ECE Seminar Hall









Mr. Ibraheem shared his professional journey and experiences in the IT industry. He guided students on the essential technical skills, placement preparation strategies, and the importance of consistent learning. He also highlighted the transition from academics to the corporate environment and motivated students to focus on coding, problem-solving, and effective communication skills to excel in the competitive world.

#### **Interaction with Students:**

The interactive session allowed students to ask questions regarding career opportunities, project development, and industry expectations. The alumnus encouraged juniors to utilize platforms like LinkedIn for professional networking and continuous growth.

#### **Conclusion:**

Overall, the event was highly beneficial as it bridged the gap between senior alumni and juniors, providing valuable insights into career planning and professional development. The Department conveys its sincere gratitude to Mr. Ibraheem for taking the time to interact with the students and for his valuable inputs.

# 8.2 ALMA REFLECTION



I, Reghu Sreekanth (207Z5A0418), graduated in 2023 and am currently working as a Semiconductor Layout Engineer at Micron Technology Private Limited. I take great pride in being an alumnus of this institution, which laid a solid foundation for my career development.

The constant guidance and encouragement from the faculty members sparked my interest in **VLSI**, helping me build strong technical skills and confidence. The supportive learning environment played a key role in shaping my career. I cherish my time here and remain deeply grateful to the department and the institution for guiding me towards success.