Department of Electronics and Communication Engineering

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Message

This issue of NEWS BITE highlights the academic, research, and cocurricular accomplishments of the Department of Electronics and Communication Engineering. The department has organized several knowledge-enriching programmes, including Faculty Development Programmes on "Data Science with Python" and "Massive MIMO and 5G Wireless Communication Systems," along with workshops on "Onboard Diagnostics for Vehicles" and "IoT in Industry 5.0," and webinars on emerging areas such as Cyber Security, Machine Learning for IoT, and NavIC systems. Students and faculty members have actively contributed through technical competitions, research publications, funded projects, and international internships at reputed institutions in Germany and South Korea. The department has also conducted various onecredit courses in advanced domains like IoT, Artificial Intelligence, Cyber Security, and 6G Networks to enhance technical skills and industry readiness. An excellent placement record has been achieved, with students securing positions in leading organizations such as Walmart, Wells Fargo, ADP, Lumen Technologies, and PwC, reflecting the department's continuous efforts towards academic excellence, research innovation, and strong industry collaboration.

Prof. Dr. V. Jaya Shankar
Dean - SoEC

Vision of the Department:

To be a centre of academic excellence through quality education and cutting-edge research in the diversified fields of electronics and communication engineering to meet the global challenges and produce high quality professionals.

Mission of the Department:

M1: To enrich the knowledge of graduate engineers for global requirements by promoting quality education through innovative pedagogical practices.

M2: To create an ambience of academic excellence by engaging in cutting-edge research and undertaking collaborative projects with academia and industry.

M3: To develop competence by inculcating human and moral values with leadership and professional skills.

Programme Educational Objectives:

PEO1: Our graduates will have in depth knowledge in mathematical and engineering concepts required to solve engineering problems in the analysis and design of Electronics and Communication Devices and Systems.

PEO2: Our graduates will have the expertise to conceive, design, implement and operate the Engineering products for the societal and environmental problems.

PEO3: Our graduates will have adequate technical skills and leadership qualities in the development of innovative solutions required in core and allied industries.

PEO4: Our graduates will adapt to multidisciplinary environment using evolving technologies and achieve professional competence through higher education, research and lifelong learning.

PEO5: Our graduates will communicate effectively, practice and promote ethical,environmental, health and safety standards in their profession.

Department Highlights

Five days FDP on **"Data Science with Python"** - 31.01.2022 to 04.02.2022

The **Department of Electronics and Communication Engineering**, in collaboration with the **Boston Training Academy**, successfully organized five days Faculty Development Programme on **"Data Science with Python"** from **January 31, 2022, to February 4, 2022**. Supported by the **MeitY Startup Hub**, the programme was designed to equip participants with essential skills in data analysis, visualization, and machine learning using Python to meet modern industry demands.

The sessions featured expert-led lectures and comprehensive hands-on laboratory training, providing a practical environment for faculty members to master data science workflows. This initiative served as a vital platform for academic professionals to enhance their technical expertise and foster research innovation in the rapidly evolving field of data science.

Department Highlights

Five days FDP on **"Overview of Massive MIMO and Other Technologies of 5G Wireless Communication System"** - 08.02.2022 to 12.02.2022
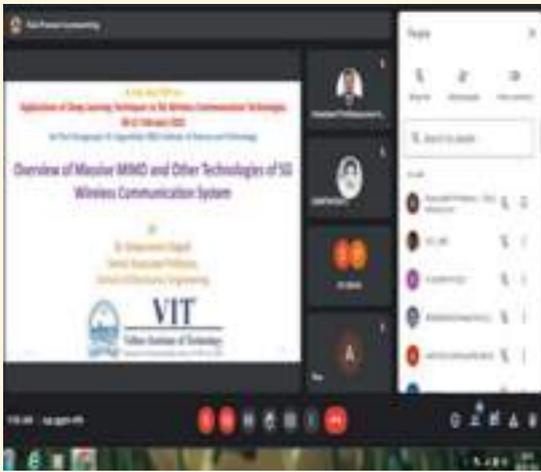
The **Department of Electronics and Communication Engineering** at **Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology** successfully organized five days Faculty Development Programme titled **"Overview of Massive MIMO and Other Technologies of 5G Wireless Communication System"** from **February 8, 2022, to February 12, 2022**. The primary objective of the programme was to provide educators and researchers with a comprehensive understanding of the intersection between advanced machine learning and next-generation wireless systems.

These technical insights were delivered by distinguished resource persons, notably **Dr. Kalapraveen Bagadi**, Senior Associate Professor from the **School of Electronics Engineering, Vellore Institute of Technology (VIT)**. The programme offered participants a valuable opportunity to explore emerging 5G standards, the architecture of Massive MIMO, and the practical implementation of deep learning to solve complex communication challenges, thereby fostering academic excellence and research innovation.

Department Highlights

Workshop on **"Overview of Onboard Diagnostics for Passenger and Commercial Vehicles"** - 04.05.2022

The **Department of Electronics and Communication Engineering** at **Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology** successfully organized a one-day workshop titled **"Overview of Onboard Diagnostics for Passenger and Commercial Vehicles"** on **May 14, 2022**. This event was specifically curated to provide students and faculty with industry-level insights into the evolving landscape of automotive electronics and diagnostics.

The workshop featured **Mr. Santhosh Kumar V.**, Assistant Manager from the **Propulsion System Department at Stellantis India (Fiat Chrysler Automobiles), Chennai**, as the resource person. Mr. Kumar provided a comprehensive deep dive into the technical architecture of Onboard Diagnostics (OBD), explaining how modern passenger and commercial vehicles monitor and report self-diagnostics.

The workshop combined expert lectures with interactive Q&A sessions, allowing participants to understand the practical challenges faced by the automotive industry. This initiative aligns with the department's commitment to providing students with exposure to cutting-edge industrial technology, ensuring they are well-prepared for careers in the automotive and embedded systems sectors.

Department Highlights

Workshop on **"IoT in Industry 5.0"**
04.05.2022

The **Department of Electronics and Communication Engineering** at **Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology** organized a one-day workshop on **"IoT in Industry 5.0"** on **May 4, 2022**. The session was led by **Mr. Mohammed Riyas** from **IT Expert Training**, who provided comprehensive insights into the evolving landscape of human-centric automation. The workshop aimed to equip participants with knowledge on smart sensor integration, edge computing, and the critical synergy between human intelligence and autonomous systems.

This initiative served as a valuable platform for students to align their technical skills with current industrial standards and foster research innovation. By focusing on the transition from mass automation to personalized manufacturing, the session highlighted the practical challenges and opportunities within the field of intelligent manufacturing. Participants engaged in technical discussions that bridged the gap between academic theory and real-world implementation, ensuring they remain at the forefront of the rapidly advancing IoT sector.

Department Highlights

Three days programme on **"Data Visualization using TableAU and PowerBI: Theory and Practice"** - 31.05.2022 to 02.06.2022
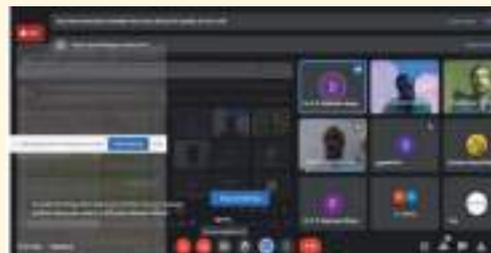

The Department of Electronics and Communication Engineering at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology organized a three days programme titled **"Data Visualization Using Tableau and Power BI: Theory and Practice"** from May 31 to June 2. The programme aimed to provide participants with practical knowledge of modern data visualization tools and techniques widely used in industry.

The sessions were handled by the resource person, Mr. K. Shobene Rangaraj, Senior Data Analyst from Accenture, Bangalore, who delivered insightful hands-on training on Tableau and Power BI, enabling participants to effectively analyze and visualize data. The programme enhanced participants' technical skills and provided valuable exposure to real-time data analytics applications.

Department Highlights

Webinar on **"Cyber Security for IoT"** - 30.04.2022

The **Department of Electronics and Communication Engineering** at **Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology** organized a specialized webinar on **"Cyber Security for IoT"** on **April 30, 2022**. This programme was designed to address the critical security challenges arising from the rapid expansion of interconnected devices in both consumer and industrial sectors. The session aimed to provide participants with a robust understanding of threat landscapes, data privacy concerns, and the architectural safeguards necessary to protect IoT ecosystems from malicious attacks.

The webinar featured **Dr. Vimalathithan Rathinasabapathy**, a distinguished Technical Consultant for IoT Start-ups and Corporates, as the resource person. Dr. Vimalathithan provided deep insights into best practices for securing IoT hardware and software, covering essential topics such as end-to-end encryption, device authentication, and vulnerability assessment. This initiative served as an excellent platform for students and faculty to enhance their technical knowledge in cybersecurity, aligning their research and skills with the urgent security requirements of the global IoT industry.

Department Highlights

Webinar on **"Machine Learning and Metaheuristic Approaches for IoT & WSN"** - 19.06.2022

The **Department of Electronics and Communication Engineering** at **Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology** organized a specialized technical session on **"Machine Learning and Metaheuristic Approaches for IoT & WSN."** The programme was designed to explore the integration of advanced computational intelligence into Internet of Things (IoT) and Wireless Sensor Networks (WSN). The primary objective was to provide participants with a deep understanding of how machine learning models and optimization algorithms can be used to enhance network lifetime, energy efficiency, and data security in complex interconnected systems.

The session was led by **Dr. P. Sivasankar**, Associate Professor at the **National Institute of Technical Teachers Training and Research (NITTTR)**, Chennai, under the Ministry of Education (MHRD), Govt. of India. Dr. Sivasankar shared his extensive expertise on using metaheuristic approaches to solve NP-hard optimization problems within sensor networks, such as cluster head selection and optimal routing. This initiative provided a critical platform for faculty and research scholars to align their academic pursuits with cutting-edge industry trends and explore innovative, AI-driven solutions for the future of smart communication.

Department Highlights

Webinar on **"An overview of NavIC (Navigation with Indian Constellation) and GAGAN (GPS Aided GEO Augmented Navigation)"** - 14.05.2022

The **Department of Electronics and Communication Engineering** at **Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology** organized a high-level technical session providing an **"Overview of NavIC (Navigation with Indian Constellation) and GAGAN (GPS Aided GEO Augmented Navigation)."** The programme was designed to educate participants on India's independent satellite navigation capabilities and the augmentation systems that enhance civil aviation safety. The primary objective was to explore the architecture of indigenous satellite constellations and their diverse applications in terrestrial, aerial and marine navigation.

The se1ssion was led by **Mr. P. Sajith**, Deputy Director of Ground Segment & Industry Interface at the **Satellite Navigation Program Office, ISRO Headquarters, Bangalore**. He provided expert insights into the technical specifications of NavIC's seven-satellite constellation and how GAGAN provides sub-meter accuracy for critical life-safety applications. This initiative served as a prestigious platform for students and faculty to understand the strategic importance of self-reliance in satellite technology and provided inspiration for future research in space-based communication and navigation systems.

Student Achievements

The department provides different platform, for the students to participate in various technical fest, sports events, and cultural activities. In list of events our students participated and brought laurels to our department.

- K.Deva Reddy (VTU17157) has won Second Prize in **"Matlab coding contest"** organized by Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

- Y Bindu Sai Priya (VTU14161) has won First Prize in the **"Joy of Creativity Through Colors"** at Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

- Harshaditya (VTU15490) has won First Prize in **"VISAI 2022"** organized by Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

- Tadiparthi Vijay Ganesh (VTU14469) and Yasala Bhavya Sri (VTU14472) have won Second Prize in **"VISAI 2022"** organized by Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

- Shaik Mouseen (VTU12548), Theddu Mukesh Reddy (VTU12371) and Vemula Harinath Reddy (VTU12520) have won Best Paper Award in International Conference **"LASMCER-2022"** at Silicon City College, India, In Association with Institute for Engineering Research and Publication (IFERP).

- S.N. Javeed (VTU14623), S.M.D Shareef (VTU14140) and S.M. Akram (VTU11277) have presented research paper in International Conference at Prince shri venkateswara padmavathy engg. college.

- Annapureddy Devansh Reddy (VTU14637), Kancham Reddy Anil Kumar (VTU14935) and Kondreddy Praneesha (VTU14394) have presented research paper in International Conference at Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

- P Mounika (VTU13381), T Hemadhri (VTU14257) and M Ramprasad (VTU12740) have published research paper in International Journal of Research in Engineering and Science (IJRES).

- G Rakesh Kumar Reddy (VTU13365) has published research paper in International Journal Of Scientific Andengineering Research (IJSER).

- P.V.Sasank Gupta (VTU13195), D.Chandra Mouli Reddy (VTU12732), A. Manikanta (VTU12945) and Yaswanth Krishna (VTU11531) have published research paper in Gradiva Review Journal.

Faculty Achievements

- Dr. A. Selwin Mich Priyadharson receieved research grant from Central Power Research Institute (CPRI) and his research entitled **"Design of Cascaded Adaptive Control with O_2 and Temperature data of Combustion Images for Optimization of Boiler Combustion Processes in a Thermal Power Plant"** for the year of 2022-2024. Research Grant Amount Rs. 29,88,000.

- Dr. Neelamegam D received a research grant from the Department of Biotechnology (DBT) for the project titled **"Development of A Sensing System for Rapid and In-situ Quality Assessment of Black Rice, Ginger (Zingiber Officinale), Elsholtzia Griffithii, And Cinnamomum Zeylanicum of North East India using Spectroscopic (NIR And Raman) Technologies"** for the period 2022–2024. The total research grant sanctioned is Rs. 29,98,560.

- Dr. Kavitha T completed Online Short-term course titled on **"Statistical Modelling and Analysis of Advanced Wireless Communication Systems"** in IIT, Indore from 17-03-2022 to 23-03-2022.

- Dr. Anandan M completed One Week Online Short-Term Course on **"Emerging Trends in Antenna Design for RF - Energy Harvesting Circuit"** NIT, Delhi from 03-01-2022 to 08-01-2022.
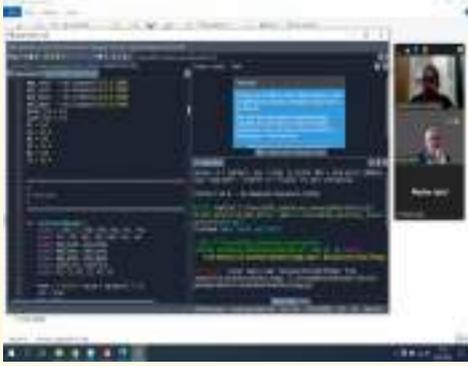
- Dr. Dasari Naga Vinod completed 40 Hours Virtual Training Program on **"Artificial Intelligence"** in Excel R from 28-03-2022 to 25-04-2022.

- Dr. Dasari Naga Vinod completed 42 Hours Live Virtual Training Program on **"Python for Data Science"** in Excel R from 16-05-2022 to 03- 06-2022.

International and Industry Internship

- Vajja Likhitha (VTU14638) and Niraj Kumar (VTU11408) with title "**Smart waste management system based on IoT Technology and App development**" at Dr. Dhananjay Singh, Department of Electronics Engineering, Hankuk University of Foreign Studies, South Korea.

- Asritha Manju (VTU14573) successfully completed an internship on the topic **"Implementation of Graphical User Interface for Controller Design"** under the guidance of Dr. Ing. Gunter Keller, Professor, Faculty of Electrical Engineering and Media Technology at Deggendorf Institute of Technology.

- Amit Sikder (VTU13581) successfully completed an internship on the topic **"Simulation of a Digital Controller of a Buck Converter"** under the guidance of Dr. Ing. Gunter Keller, Professor, Faculty of Electrical Engineering and Media Technology at Deggendorf Institute of Technology.
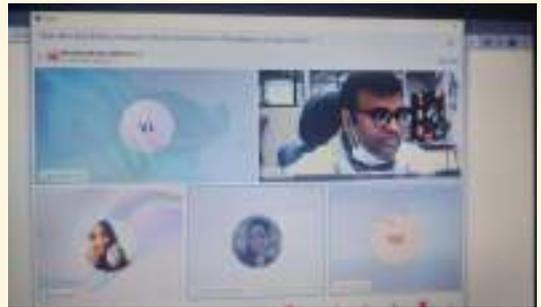
- Meesala Sai Pramitha (VTU14443) and Kasula Rakesh (VTU11125) successfully completed an internship on the topic "**An Analysis of Traffic Congestion and Visualization of AVL GPS Data Study in Hajj**" under the guidance of Dr. Dhananjay Singh, Department of Electronics Engineering at Hankuk University of Foreign Studies, South Korea.

- M. Kavya Nikhita (VTU14662) has completed an internship on the topic "**Deep Learning Architecture for Multimodal Sentiment Analysis**" under the guidance of Dr. Dhananjay Singh at Hankuk University of Foreign Studies, South Korea.

- Swapnil Datta (VTU11689) successfully completed an internship on the topic "**Future Internet – 5G and Beyond**" under the guidance of Dr. Dhananjay Singh at Hankuk University of Foreign Studies, South Korea.

- P. Hemanvitha (VTU14257) and A. Sparsha (VTU11203) have completed their project at Electronics Corporation of India Limited, Hyderabad.

- N Pavithra (VTU12111), U.Susmitha (VTU15092), Kattekota Chikitha (VTU12182) and V.V Enkata Chaithanya (VTU14262) have completed their project at Kwality Photonics Pvt. Ltd, Electronics manufacturer in Secunderabad, Telangana.

- Amara Sri Sai Ganesh (VTU11541) and Rajnikant Kushwaha (VTU13584) have completed their project at Nucleonix Systems Private Limited, Electronics manufacturer in Secunderabad, Telangana.
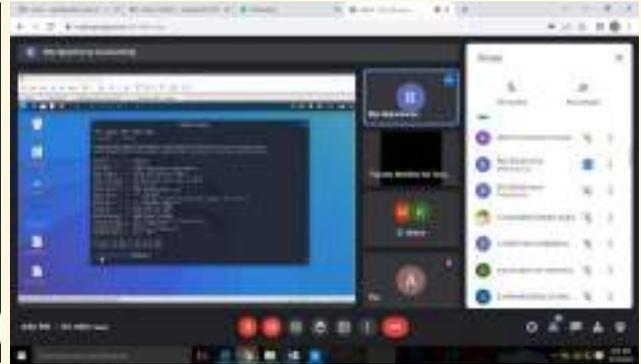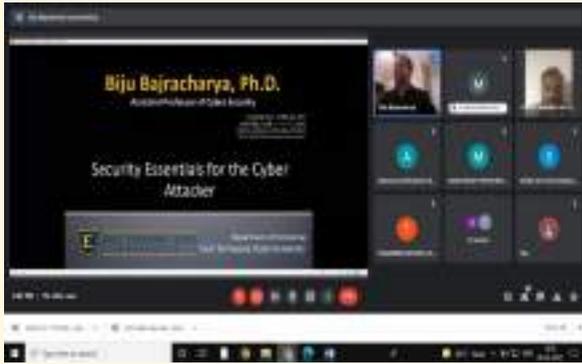
One Credit Courses

- Professor Dr. Biju Bajracharya taught a one-credit course titled "**Real Time Systems and Internet of Things**" at the ECE Embedded and IoT Laboratory. This course provided valuable hands-on exposure and strengthened our understanding of real-time applications in modern IoT systems
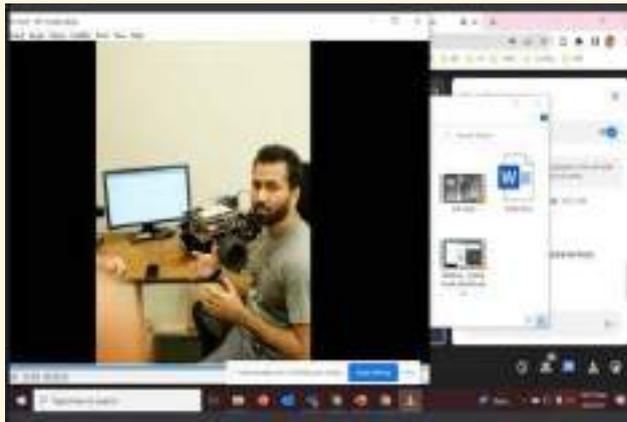

- Professor Dr. Raju Aedla taught a one-credit course titled "**Remote Sensing and Digital Image Processing**" at the ECE Gallery Hall. The course provided valuable insights into image analysis techniques and their applications in real-world scenarios. It also introduced key concepts of remote sensing data interpretation and processing methods. The sessions enhanced students' ability to analyze and extract meaningful information from digital images.
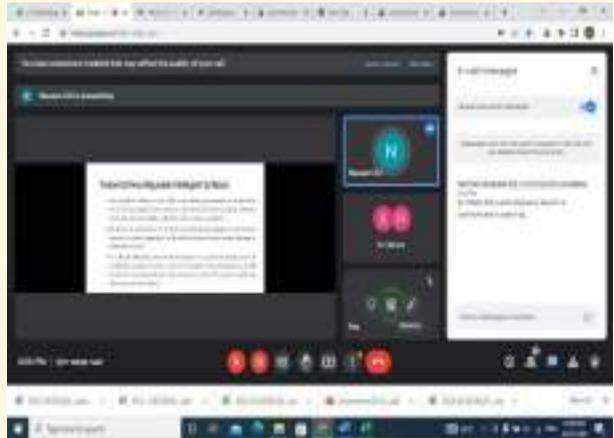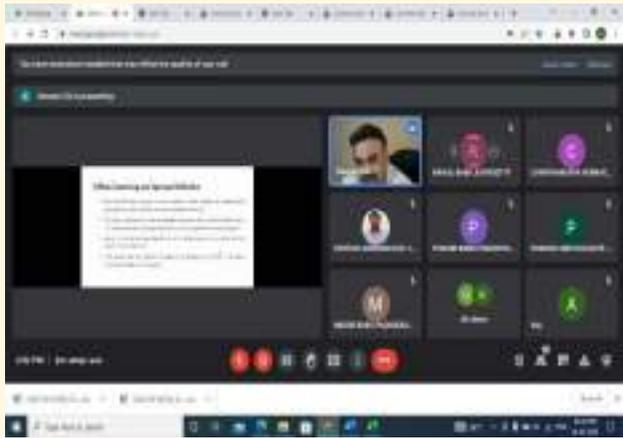
One Credit Courses

- Professor Dr. Biju Bajracharya taught a one-credit course titled "**Security Essentials of Cyber Attacker**" through online mode. This course provided valuable insights into cybersecurity fundamentals and common attack techniques used in real-world scenarios. It also covered essential concepts of system vulnerabilities and risk assessment methods. The sessions helped students understand preventive measures and best practices for securing digital systems.

- Professor Dr. Ahmed Abdelgawad taught a one-credit course titled "**IoT and Artificial Intelligence**" through online mode. The course provided valuable insights into the integration of IoT with AI and its applications in modern smart systems. It also introduced key concepts of data-driven decision making in intelligent IoT environments. The sessions enhanced students' understanding of building smart and automated systems using AI techniques.

One Credit Courses

- Professor Dr. Ahmed Abdelgawad taught a one-credit course titled "**IoT and Artificial Intelligence**" through online mode. This course provided valuable insights into the integration of IoT with AI and its applications in modern smart systems. It also introduced key concepts of intelligent data processing in IoT-based systems.

- Professor Dr. Celestine Iwendi taught a one-credit course titled "**Artificial Intelligence for IoT**" through online mode. The course provided valuable insights into the integration of AI techniques within IoT systems and their real-world applications.

- Professor Dr. Ahmed Abdelgawad taught a one-credit course titled "**IoT Sensors, Communication Technology and Protocols**" through online mode. The course provided valuable insights into various IoT sensors, communication technologies, and protocols used in modern connected systems.

Placement

- Ayaluri Kameswara Karthik (VTU12255) placed in WellsFargo International Solutions with 20 LPA

- Sai Sudheer Seeram (VTU14649) has placed in ADP with 8.8 LPA

- Medara Sai Ganesh (VTU13349) has placed in IDP with 8 LPA

- Nuvvula Ashok (VTU12088), Srinivasareddy Marthala (VTU14253) students placed in Open Text with 8 LPA

- K Lokesh Srinivasa varma (VTU11683) student placed in M/S Walmart with 7 LPA

- Sai Venkata Sai Venkata Raghavan Nookala (VTU11100), Avinash Reddy (VTU14552), who have placed in Lumen Technologies with 6 LPA

- Soumi Mukhopadhyay (VTU12242) who has placed in Principal Global with 6 LPA

- K Lokesh Srinivasa varma (VTU11683) who has placed in PwC Acceleration Center with 6 LPA

S. No.	No. of Students	Company Name	Package (CTC)
1	1	Infosys	5.5 LPA
2	2	Harman Kardon	5.0 LPA
3	7	Harman	5.0 LPA
4	35	HCL	4.75 LPA
5	2	Virtusa	4.5 LPA
6	3	ITC InfoTech	4.25 LPA
7	3	Donyati	4.2 LPA
8	1	Valued Epistemics	4.2 LPA
9	1	Easa Saleh AI Gurg Group LLC	4.2 LPA
10	12	DXC	4.0 LPA
11	34	Mphasis	4.0 LPA
12	8	Mindtree	4.0 LPA
13	1	Infosys	3.6 LPA
14	6	ZelfStudie	3.6 LPA
15	1	Byju's	3.6 LPA
16	3	TCS	3.5 LPA
17	1	Hexaware	3.5 LPA
18	6	CGI	3.5 LPA
19	4	Avasoft	3.5 LPA
20	2	Rapid Data	3.5 LPA

Vel Tech
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R&D Institute of Science and Technology
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