



MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY

Kalitheerthalkuppam, Madagadipet, Puducherry - 605 107

DEPARTMENT OF ROBOTICS AND AUTOMATION

NEWSLETTER- June- 2023

About the Department:

The Department was started in the year 2020, our department is one of the newest departments to our college. Robotics and Automation is the new program for Engineering, Robotics and Automation is a multi-disciplinary program, it involves electrical, electronics, mechanical, computer science and AI techniques of robotics. Robotics and Automation Engineering is one of the emerging multi-disciplinary areas transforming conventional practices in industry to digitalization which plays a crucial role in the Prime Minister's Call 'MAKE IN INDIA', 'DIGITAL INDIA' and INDUSTRY 4.0. Robotics and Automation plays a major role in manufacturing units, medical science, space, etc., with the rapidly advancing process of inclusion of robots from Industry to the Social Arena, the functional requirement of the robots and corresponding human expectations has increased tremendously. However, in order to fully comprehend the complexities of such robot design, one needs to possess an over-all idea of the field.

Vision

To be a centre of excellence in the field of Robotics and Automation by providing excellent education, training, research and inculcating human values to cater the needs of the industries and society.

Mission

- **Higher Order Thinking:** To equip the students with higher order thinking and technical skills in Robotics and Automation through effective teaching learning methodologies.
- **Competency:** To educate and train the students with state of art technologies, industry institute interaction and promote research in the field of Robotics and Automation.
- **Continuous learning:** To provide an ambience that facilitate self learning, collaborative learning and acquire multidisciplinary knowledge.
- **Entrepreneurship:** To encourage the students by nurturing creativity and innovation to launch start-ups and promote entrepreneurship.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- **PEO1: Employability:** Our Graduates shall be suitably employed with professional competency and knowledge of modern tools.

- **PEO2: Higher Education:** Our Graduates shall be capable to pursue higher studies/research in the field of engineering and management.
- **PEO3: Entrepreneurship:** Our Graduates shall be prepared for a successful career by meeting ever increasing demands required by Robotics and Automation profession and enable them to become an entrepreneur.
- **PEO4: Professional and Ethical values:** Our Graduates cultivate professional and ethical attitudes with effective communication skills, team work and multidisciplinary approach related to engineering issues.

Program outcomes (POs)

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

	and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcome (PSO)

PSO1: Process Automation: Create and apply simulation tools for modern engineering and real time Automation process.

PSO2: Products Development: Design, analysis and to develop a Robotics and Automation products in health care, security, defense, space research, banking, entertainment applications.

Staff Activities

1. Dr.G.Renuka Devi, Prof/RA has completed and received Ministry of Education-GOI certification on “Quality Assurance through NAAC Accreditation Process” on 25.02.2023.
2. Dr.G.Renuka Devi, Prof/RA has completed and received NPTEL certification with ELITE(Silver) on “Teaching and Learning in Engineering (TALE)” on 26.03.2023.
3. Ms.S.S.Ayswariya, AP/RA has completed and received NPTEL certification on “Opamp Practical Applications-Design, Simulation and Implementation” on 30.04.2023.



Dr.G.Renuka Devi, Prof/HoD/RA has received Best Teacher Award (Engineering) on 11.05.2023.

- Dr.V.Govindan, ASP/RA has Participated & completed successfully Five Day online Professional Development Program on “MATLAB & LABVIEW Programming For Engineering Application”, National Institute of Technical Teachers Training and Research-Chennai from 29.05.2023 to 02.06.2023
- Dr.G.Renuka Devi, Prof/RA and Dr.V.Govindan, ASP/RA has Participated & completed successfully Five Day online Professional Development Program on “Circuit simulation and PCB Design using Multisim”, National Institute of Technical Teachers Training and Research-Chennai from 05.06.2023 to 09.06.2023
- Ayswariah SS, AP/RA, Kiruba Sandou, AP/RA has successfully Completed 9 days Faculty development programme on " Outcome Based Education", organized by IQAC & PSG, CBE from 01.02.2023
- Ayswariah SS, AP/RA, Kiruba Sandou, AP/RA has successfully Completed one day seminar on " Writing Research Paper and Article", organized by R&D Cell, MVIT, CBE on 20.02.2023.
- Ayswariah SS, AP/RA, Kiruba Sandou, AP/RA has successfully Completed 5 Days Faculty Development Program on " Machine Learning in Big Data Applications and Security Challenges", organized by MLR Dindigal, Hyderabad on 24.04.2023.

Department Activities:



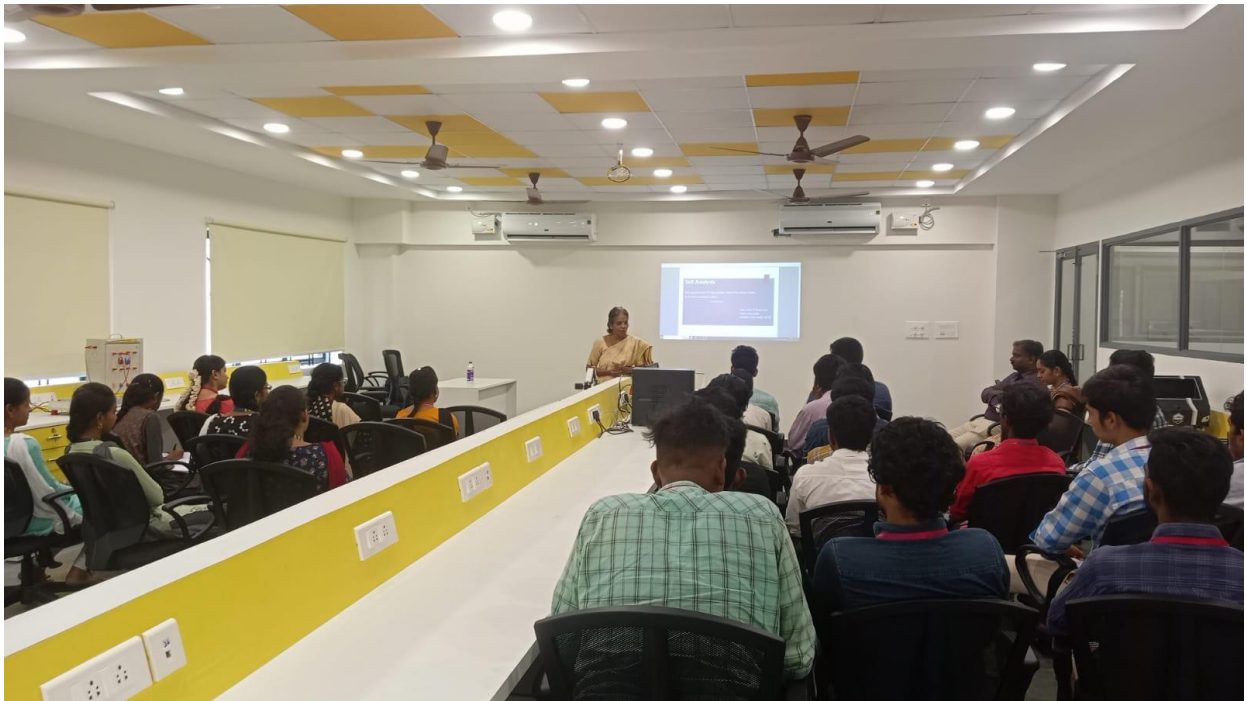
Department of Robotics and Automation has organized a session on “Intellectual Property Rights” for II & III - year Robotics and Automation students on 11.01.2023 at RA lab. The session was delivered by Dr.Jeyakumar, Patent Consultant.



Department of Robotics and Automation has organized Industrial Visit on 30.03.2023 at Villupuram District Co-operative Milk Producers Union Ltd.



Department of Robotics and Automation – MITILENCE -2023 on 24th Mar 2023.



Department of Robotics and Automation has organized a Seminar on Motivational Session on **“Me on Mission”** for II & III - year Robotics and Automation students on 18.03.2023 at RA lab. The session was delivered by Ms.Radjalatchoumy Manikannan, Antares Publishing Services, Chennai.



Department of Robotics and Automation is organizing an internal workshop on **“Hands on Training on Dobot”** for 1st year Robotics and Automation on 18.03.2023 (Saturday), 03.00 PM to 04.30 PM at RA lab.



Department of Robotics and Automation has signed a MoU with Sigetech Embedded And Robotics Solutions Pvt Ltd, Chennai on 05.04.2023



Department of Robotics and Automation has organized a Guest lecture on “Reconfigurable Robotics”. The session was delivered by Mr. Manojkumar, Scientific Advisor, Sigetech Embedded And Robotics Solutions Pvt Ltd, Chennai for II & III year students on 05.04.2023.



Department of Robotics and Automation has organized Industrial Visit on 19.04.2023 at Eaton Power Quality Pvt Ltd.



Department of Robotics and Automation has inaugurated Robotics and Automation Students Association on “ROBOZEN” on 12-05-2023. The chief guest of the inauguration is Mr. Anantharaman Prakash, Vice President, Product Engineering, Renault Nissan Technology and Business Center India Pvt. Ltd. Mahindra World City, Chennai.



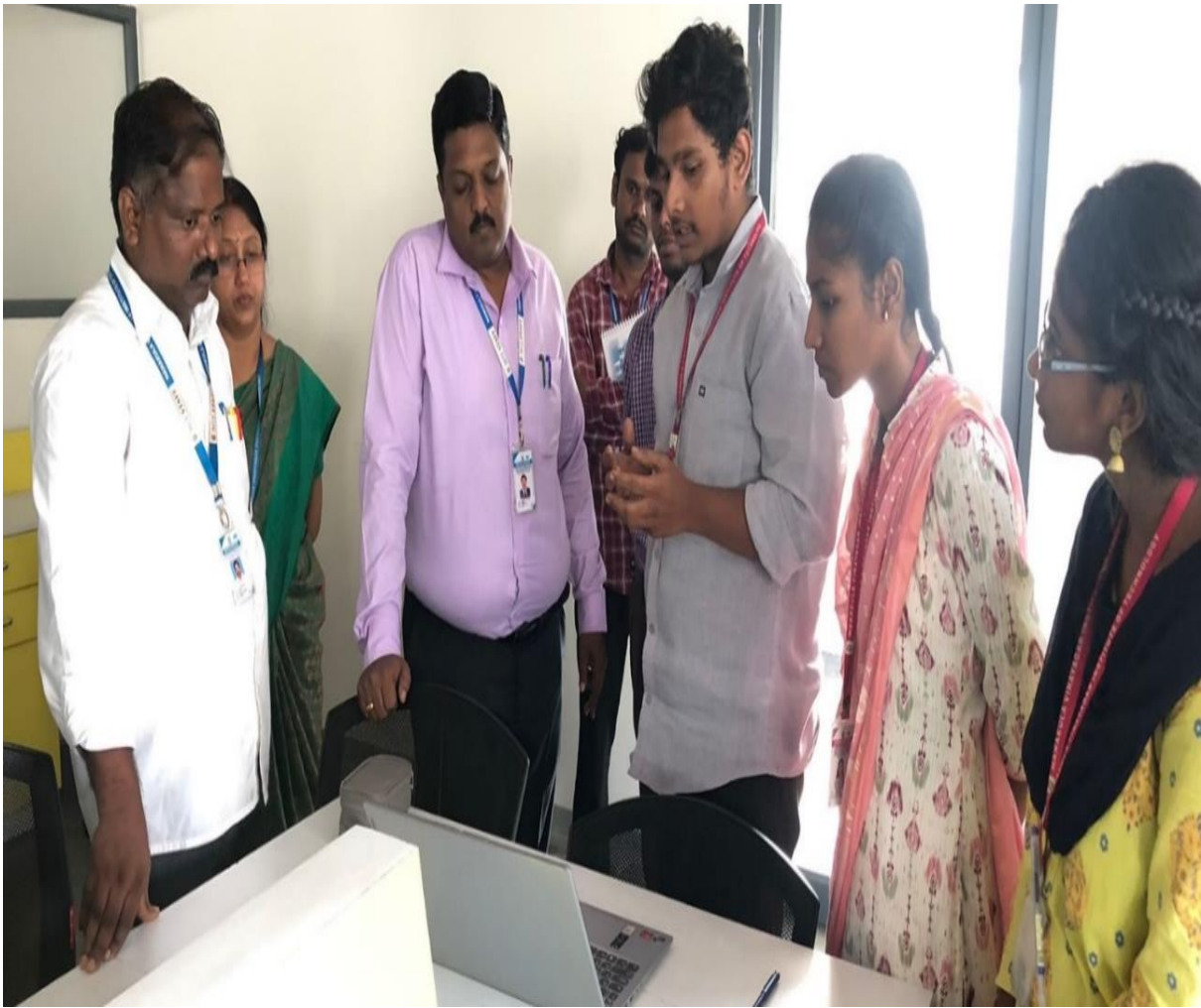
Department of Robotics and Automation has organized SAE Collegiate Club Inauguration with SAE India Southern Section Mahindra World City Division on 12-05-2023. The Chief Guest for the SAE Collegiate Club Inauguration is **Mr. Anantharaman Prakash, Vice President, Product Engineering, Renault Nissan Technology and Business Center India Pvt. Ltd. Mahindra World City, Chennai.** The Guest of Honor of the session is **Mr.S.Shanmugam, Managing Director, Design Desk India Pvt. Ltd., and Past Chairman of SAEISS, Chennai.**



Department of Robotics and Automation has organized a Guest lecture on Careers and Competencies Preparing for the 21st Century Jobs. The session was delivered by **Mr.S.Shanmugam Managing Director Design Desk(India) Pvt Ltd, Past Chairman of SAEISS,Chennai** for II & III year students on 12.05.2023



Mini project- EXPO conducted for II-year students on 31.05.2023



Mini project- EXPO conducted for III-year students on 31.05.2023



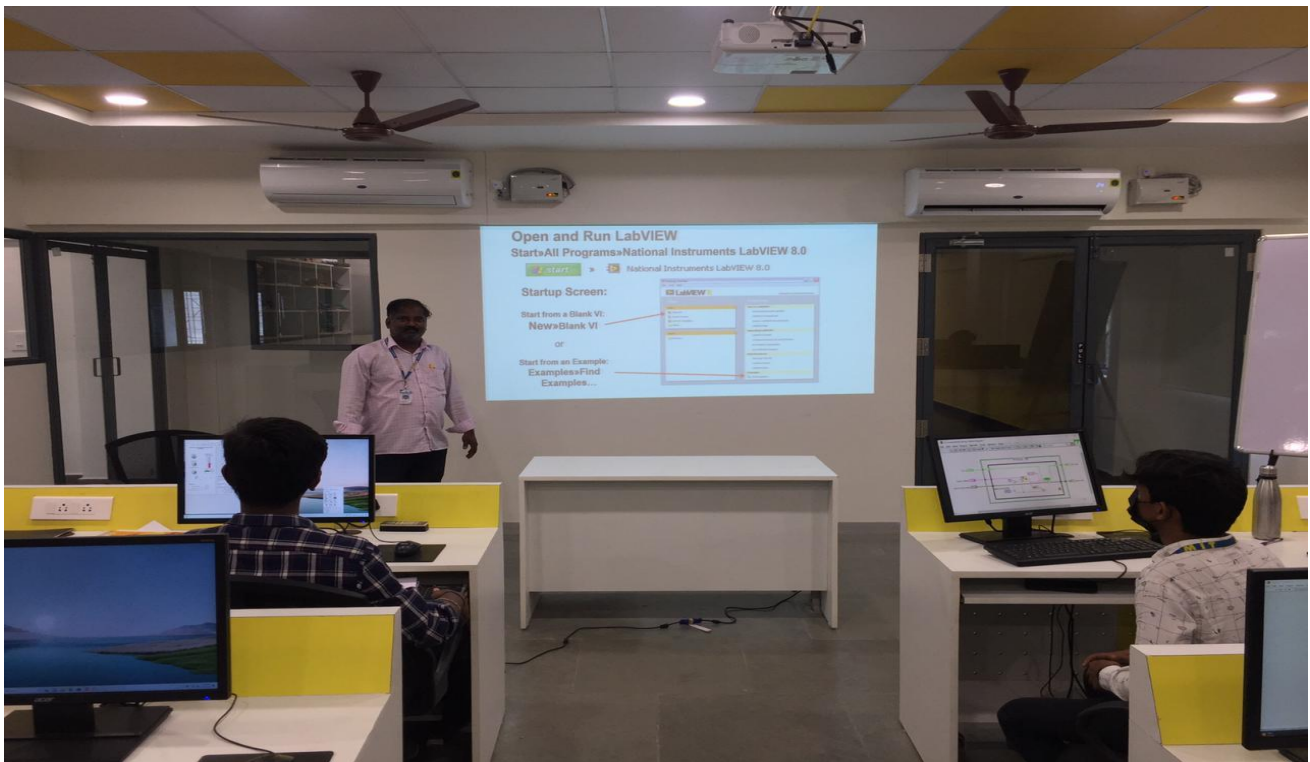
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Dr.G.Renuka Devi, has delivered Special Lecture on Automatic Control System for II – year students on 25.02.2023



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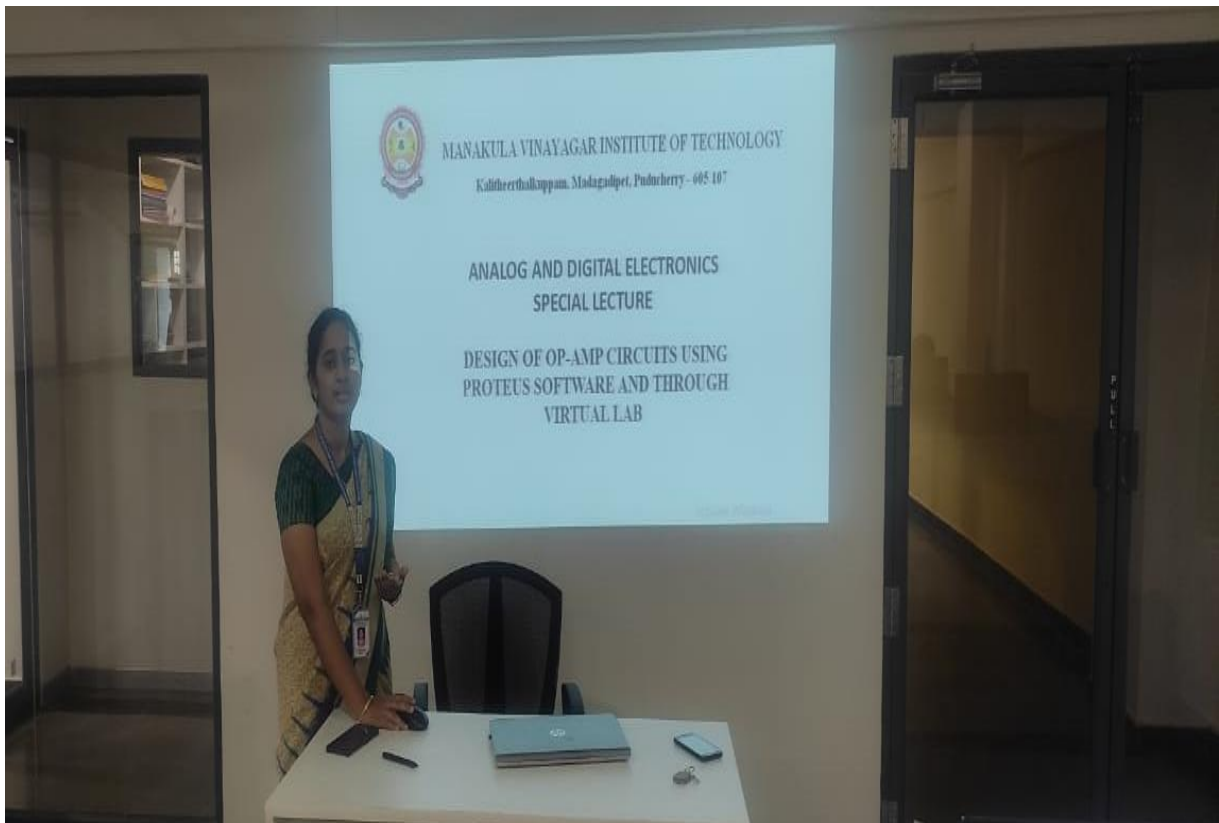
Mr.A.Baskaran,AP/RA, has delivered Special Lecture on “PLC and SCADA” for II & III Year/RA students on 24.02.2023.



Dr.V.Govindan, has delivered Special Lecture on “LABVIEW” for II & III year students on 11.03.2023



Mrs.KirubaSandou ,AP/RA, has delivered Special Lecture on “Optimization on new and existing Devices” II & III Year/RA Students on 25.03.2023.



Ms.S.S.Ayswariah, AP/RA, has delivered Special Lecture on “Design of Op-Amp circuits using Proteus Software through Virtual Lab” for II & III Year/RA Students on 31.03.2023.



Department of Robotics and Automation has organized Industrial Visit on 10.06.2023 at ThorabPharma

Student Participation:



A.Jagadish of III year Robotics and Automation Department participated in Paper Presentation in Puducherry Technological University on 24th February 2023 and got first place.



Hariharan.S, Parthasarathi.S & Harikrishnan.A of II year Robotics and Automation Department participated in 13th Project EXPO SCIMIT'23 organised by Manakula Vinayar Institute of Technology on 28th February 2023 and got the first place.



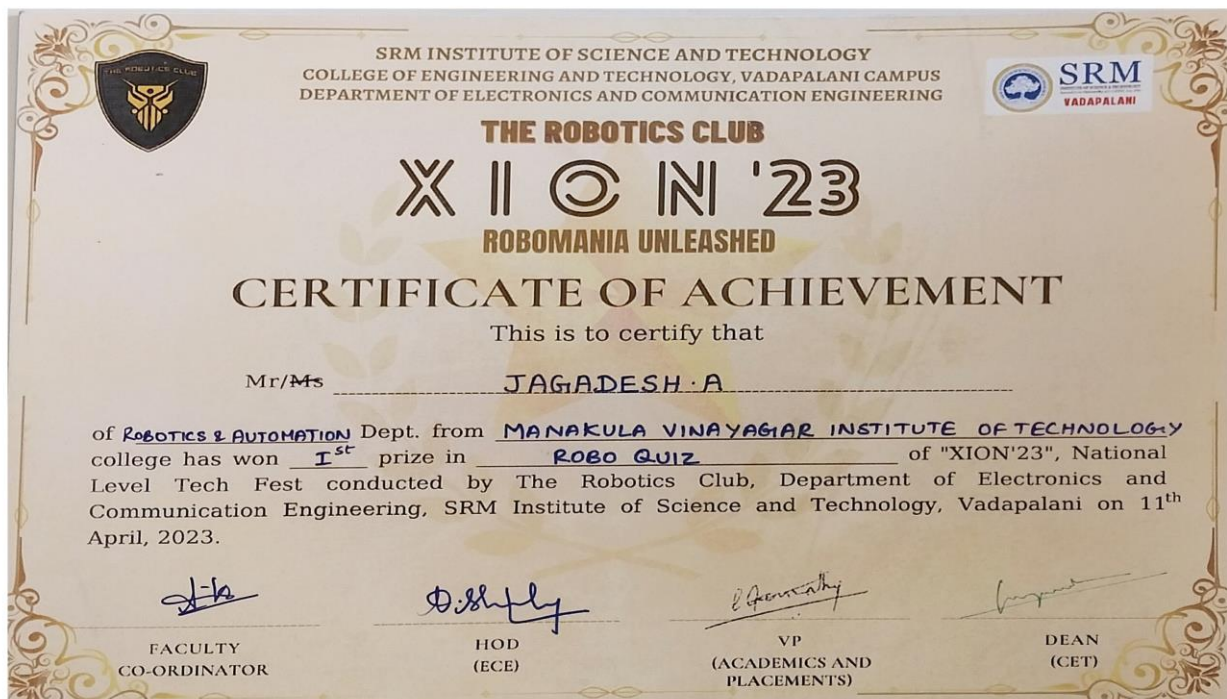
A.Jagadish of III year Robotics and Automation Department participated in Solo Singing in Christ College of Engineering and Technology on 10th March 2023 and got first place.



Dinakaran.S, Parthasarathi .S Mohanane & Hariharan.S of II year Robotics and Automation Department participated in Line Follower Robot organised by MITILENCE -2023, Manakula Vinayagar Institute of Technology on 24th March 2023 and got first place.



Golvainbec Jotham, Hariharan.S, Dinakaran.S & Parthasarathi.S of II year Robotics and Automation Department participated in Robo Race organised by MITILENCE -2023, Manakula Vinayagar Institute of Technology on 24th March 2023 and received second place.



A.Jagadish of III year Robotics and Automation Department participated in Robo Quiz

in Xion23 in SRM university on 11th April 2023 and got first place.



J.Golvainbec Jotham & L.Thiruppa of II year Robotics and Automation Department participated in We/App Development Challenge organised by, Manakula Vinayagar Institute of Technology on 6th April 2023 and got Second place for Canteen App Developed.



Parthasarathi.S & Dinakaran.S of II year Robotics and Automation Department participated in Line follower event Technospark-23 organised by Rajiv Gandhi College of Engineering and Technology on 4th May 2023 and bagged first place.