



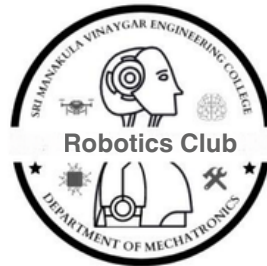
SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
(AN AUTONOMOUS INSTITUTION)



DEPARTMENT OF MECHATRONICS

***ROBO TecX CLUB
ANNUAL REPORT***

(Academic Year: 2024 to 2025)



Submitted by
Mr. S. Prakash
Assistant Professor
Faculty Coordinator



Preface

The Robo TecX Club of the Department of Mechatronics Engineering, Sri Manakula Vinayagar Engineering College, serves as a dynamic platform to nurture innovation, technical competence, and collaborative learning among students. The club is established with the objective of bridging the gap between theoretical knowledge and practical implementation in the domains of robotics, automation, embedded systems, and intelligent technologies. The club actively encourages students to explore emerging trends in robotics and automation through hands-on workshops, technical training programs, expert lectures, project development, competitions, and interdisciplinary activities. By fostering creativity, problem-solving skills, and teamwork, the club aims to prepare students to meet the challenges of modern engineering and industrial automation. The effective functioning of the club is supported by a dedicated team of office bearers, including the President, Vice President, Treasurer, and Technical Head, who work collectively with enthusiastic club members to plan, organize, and execute various technical and co-curricular activities. Their leadership and commitment play a crucial role in ensuring the successful achievement of the club's objectives. Through continuous learning, innovation, and industry-oriented initiatives, the Robo TecX Club strives to develop technically sound, socially responsible, and professionally competent engineers. The club remains committed to contributing to the overall academic excellence and technological advancement of the institution.



Faculty Coordinator
Mr. S. Prakash



HoD/ MCTR
Dr. G.B.M. Mohan Raj



IQAC Coordinator
Dr. Arivalagar A A



Director Cum Principal
Dr.V.S.K. Venkatachalapathy

TABLE OF CONTENTS

01 About Institution

02 Vision & Mission

03 About Department

04 Vision & Mission

05 About Club

06 Activity Details



ABOUT THE INSTITUTE

Sri Manakula Vinayaga Educational Trust was founded to provide quality and affordable education to the weaker sections of society. The trust established Sri Manakula Vinayagar Engineering College (SMVEC) in 1999. SMVEC is an autonomous institution affiliated to Pondicherry University. It offers 13 undergraduate, 8 postgraduate and 11 Research programs in engineering. SMVEC has been accredited by NAAC with “A” grade and NBA. The institution is also accredited by TATA consultancy services. The college has a good placement record with students getting job offers from top companies in India and abroad. SMVEC students have won many awards and accolades for their academic achievements. To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.

Vision

- To nurture the cornerstone of excellence in engineering education and drive innovation by seamlessly integrating the fundamentals of Science and Humanities

Mission

M1: Quality Education : To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.

M2: Research and Innovation : To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.

M3: Employability and Entrepreneurship : To inculcate the employability and entrepreneurial skills through value and skill based training.

M4: Ethical Values : To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.



ABOUT THE DEPARTMENT

The Department of Mechatronics Engineering is a top-notch department that offers high-quality UG, PG and PhD programs. The UG program B.Tech - Mechatronics Engineering is accredited by the National Accreditation Board, AICTE-New Delhi, and has a placement record of over 80%. The department's graduates are highly sought-after by employers in the Mechatronics sector.

Our department contributes significantly to achieving the national objective of envisioning the world with a clear and deep commitment and a sincere desire to meet the expectations of a rising, fast-developing technology.

Vision

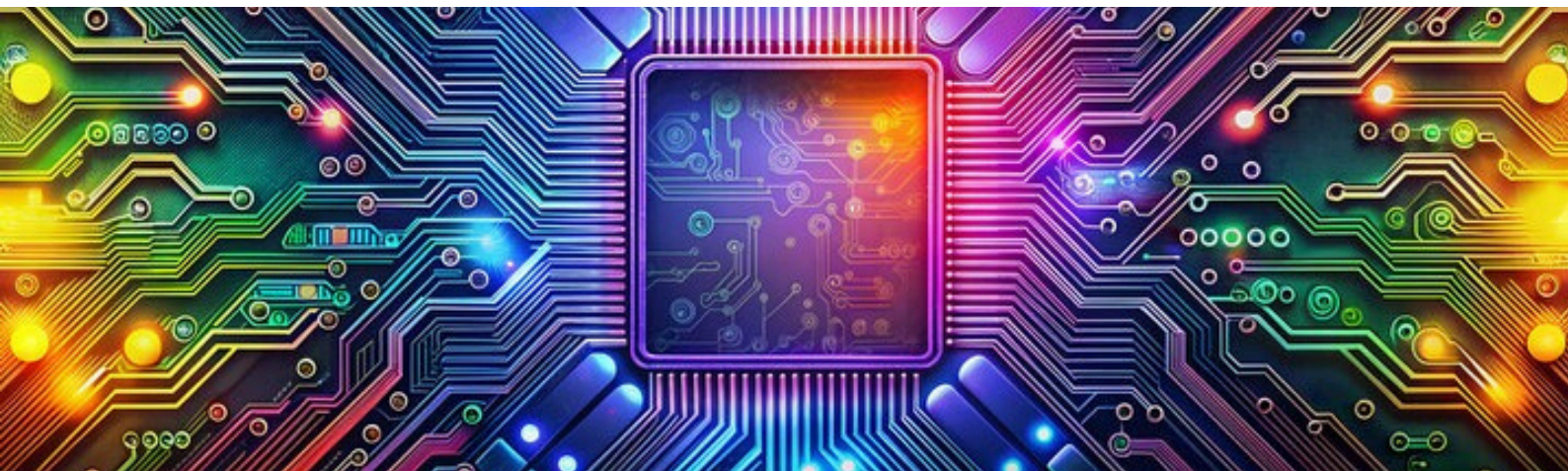
To be a department with outstanding competencies in education and research in interdisciplinary field of Mechatronics Engineering for the prosperity of students and society.

Mission

- **Quality Integration:** To uphold excellence in education by integrating the teaching learning process with hands on trainings in updated technologies.
- **Research Exploration:** To maintain a dynamic balance between learning and research by encompassing activities related to Research, Industrial projects and Innovation Contests.
- **Personality Development:** To enrich the team spirit and entrepreneurship skills through training programmes on personality development for career prospects.
- **Social Ethics:** To enhance the principle of highest ethical values by inculcating code of conduct for the betterment of the Society.

Programmes offered

- B.Tech - Mechatronics Engineering
- M.Tech - Mechatronics Engineering
- M.Tech - VLSI & Embedded Systems
- Ph.D - Mechatronics Engineering



"Shaping a smarter world through circuits, signals, and systems."

ABOUT ROBOTICS AND AUTOMATION CLUB

The Robo TecX Club from the department of Mechatronics is dedicated to exploring cutting-edge advancements in robotics, AI, and automation, with the overarching theme of "Empowering and Innovating the future with the intersection of Robotics and AI." Our club provides a platform for students to apply theoretical knowledge in practical, hands-on projects that encourage critical thinking, teamwork, and problem-solving. From designing autonomous robots to implementing intelligent control systems, club activities span a broad range of real-world applications. Through workshops, competitions, and collaboration with industry experts, the club cultivates technical skills and inspires creativity, preparing students to become leaders in the rapidly advancing fields of robotics and automation.

Objectives of Robo TecX Club

The primary goal of robotics club are as follows:

- To foster hands-on skills in designing, building, and programming robots, enabling students to bridge the gap between theoretical concepts and practical applications.
- To encourage innovative thinking and creative problem-solving by challenging students to develop unique robotic and automation solutions.
- To keep members updated on the latest advancements in robotics and automation technologies through workshops, webinars, and expert talks.
- To prepare students for national and international robotics competitions by providing resources, guidance, and a platform for experimentation.
- To inspire research in emerging areas of robotics and automation, such as AI, machine learning, IoT, and human-robot interaction.
- To promote teamwork and collaboration among students from various disciplines for solving complex engineering problems.



OFFICE BEARERS

The Robotics Club is led by a dedicated team of office bearers who play a vital role in driving the club's activities and fostering a culture of innovation. The team typically includes a President, Vice President, Secretary, Treasurer, and Technical Leads, each bringing unique skills and responsibilities to the table. These office bearers coordinate workshops, manage resources, mentor junior members, and oversee project development. Their leadership ensures smooth operation of the club while encouraging creativity, collaboration, and hands-on learning in the field of robotics. Through their efforts, the club continues to be a hub of technical excellence and a launchpad for future innovators.



Mr. S. Prakash
Assistant
Professor Faculty
Coordinator



Kailasanathan D
President
III



Kavya M
Vice President
III



Namidha S
Secretary
III



Vijay @ Adhithiya S
Technical Head
III

LIST OF EVENTS

S. No	Title of the Events
01	INTRODUCTION TO ROBOTICS
02	PROJECT MAKING
03	PROJECT DEMONSTRATION

INTRODUCTION TO ROBOTICS

The Robo TecX Club organized an Seminar titled “Introduction to Robotics” on virtual mode at the Department of Mechatronics.

The seminar focused on providing a comprehensive overview of robotics, covering fundamental concepts, core components, and basic working principles of robotic systems. The session introduced participants to key elements such as sensors, actuators, controllers, and programming techniques that enable robots to perform automated tasks efficiently.

The seminar also highlighted the importance of robotics in various industries, including manufacturing, healthcare, agriculture, and service sectors. Emerging trends, research opportunities, and career prospects in robotics and automation were discussed to enhance students’ technical awareness and professional outlook.

The event aimed to strengthen students’ foundational knowledge in robotics, spark curiosity about technological innovations, and encourage active participation and meaningful discussions in the field of automation and intelligent systems.

- Total Number of Participants : 73
- Year of students: I, II, III and IV
- Venue : Department of Mechatronics
- Date : 1/02/2025
- Event Coordinator: Mr. S. Prakash
- Mode of seminar: Offline

Objective of the Seminar

- The primary objective of this event is to highlight the significance of robotics in industrial automation and to share a glimpse of job opportunities in the field of robotics with the students.
- To enhance the technical knowledge of students about robotics in electronics.
- To create interest among the students towards industry automation.
- To make the students interact with the resource person for knowledge transfer.

Outcome of the Seminar

- To enhance the technical knowledge of students about robotics in electronics.
- To create interest among the students towards industry automation.
- To make the students interact with the resource person for knowledge transfer.

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DEPARTMENT OF MECHATRONICS

SMVEC/MCTR/GL/2024-25/09

Date: 31.02.2025

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(For Students)

This is to inform that a seminar is planned for the department students on the topic **"Introduction to Robotics"** on **01.02.2025 (Saturday)** at **02.00 P.M.** In this regard, students are requested to gather in **Lecture Hall 1**.

PROGRAMME COORDINATOR

(Mr. S. Prakash)

HOD/MCTR

(Dr. G.B.M. Mohan Raj)

PHOTO GALLERY



PROJECT MAKING

The Robo TecX Club recently organized a Project Making activity for first-year students to help them understand the practical aspects of robotics and its real-world applications. The session focused on guiding students through the fundamentals of planning, designing, and assembling basic robotic projects.

- Total Number of Participants : 73
- Year of students: I, II, III, & IV
- Date: 09/11/2024
- Venue : Department of Mechatronics
- Event Coordinator: Mr. S. Prakash
- Mode of activity: Offline

Objective of the Activity

- To inculcate interest among the freshers to involve themselves in the field of robotics
- To enhance the technical knowledge of students about robotics in electronics.
- To create interest among the students towards industry automation.
- To make the students interact with the resource person for knowledge transfer.

Overview of the Activity

The Robo TecX Club recently organized a practical demonstration session titled "Project Making" for Our students, aiming to bridge theoretical concepts with real-world applications of robotics. The event was conducted in Department of Mechatronics . The session was led by club representatives. The program began with an introductory discussion on the fundamentals of robotics to engage and build rapport with the attendees. The presenters explained the design, functionality, and practical applications of the bot in detail. Students were then invited to operate the bot themselves, gaining valuable hands-on experience in its working mechanism .To conclude the session, participants took part in assembling the robot using the given components. This interactive and collaborative segment sparked significant enthusiasm and curiosity among the students, encouraging further interest in robotics and automation.

Outcome of the Event

- Students gained practical knowledge of robotics concepts through direct interaction with the Project Making
- Participants successfully assembled and operated the bot, improving their technical confidence and skills.
- The session sparked curiosity and enthusiasm among Department students toward robotics and automation.
- The activity encouraged teamwork and peer learning, fostering a collaborative learning environment within the club.

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DEPARTMENT OF MECHATRONICS

SMVEC/MCTR/GL/2024-25/15

Date: 8.11.2025

CIRCULAR

(For Students)

We would like to inform you that the “**Robo Tecx Club**”, part of the **Department of Mechatronics Engineering**, has planned to host a technical session on “**Project Making and Development**” for First-Year students on **November 9,24**. Students are hereby instructed to participate in the event and enhance their technical and practical knowledge.

PROGRAMME COORDINATOR

(Mr. S. Prakash)

HOD/MCTR

(Dr. G.B.M. Mohan Raj)

PHOTO GALLERY



PHOTO GALLERY



PROJECT DEMONSTRATION

Project Demonstration gives students the opportunity to show how their project works in front of teachers and classmates. Students demonstrate the functionality of their project, explain the role of each component, and highlight the steps they followed to create it. This activity helps students connect theory with practice, develop confidence, improve technical understanding, and enhance their communication skills by presenting and explaining their work clearly.

- Total Number of Participants : 73
- Year of students: I, II, III & IV
- Date: 16/11/2024
- Venue : Department of Mechatronics
- Mode of Activity: Offline

Objective of the Activity

- To introduce first-year students to the interdisciplinary nature of Robotics and Electronics & Communication Engineering (MCTR).
- To provide insights into how MCTR concepts are applied in modern robotic systems.
- To create awareness about the career opportunities and future scope in the field of robotics and automation.
- To encourage active student participation in technical discussions and club activities.

Overview of the Activity

The Robo TecX Club organized a technical discussion titled “Project Demonstration” Unleashing Innovation in Modern Engineering" exclusively for first-year students. The session aimed to bridge the gap between foundational electronics and emerging trends in robotics. The session was coordinated by the club representatives and featured a keynote discussion by , a first-year student, who elaborated on the strong interconnection between the MCTR domain and Robotics. He discussed how core subjects such as embedded systems, sensors and actuators, signal processing, and communication technologies play a crucial role in the design and functioning of robotic systems. And highlighted the growing industry demand for robotics skills and shared insights into various application areas, including automation, healthcare robotics, defense, and smart systems. The interactive nature of the session helped first-year students understand the practical relevance of their academic subjects and sparked their interest in exploring robotics further.

Outcome of the Activity

- Academic Relevance Realized: First-year students gained clarity on how core MCTR subjects directly contribute to real-world robotics applications.
- Industry Insight Gained: The session provided valuable exposure to current trends and career opportunities in robotics across multiple sectors.
- Interest & Engagement Boosted: The interactive discussion inspired students to explore robotics more actively, fostering curiosity and motivation for future involvement in the club.

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DEPARTMENT OF MECHATRONICS

SMVEC/MCTR/GL/2024-25/20

Date: 14.11.2024

CIRCULAR

(For Students)

We would like to inform you that the “**Robo TecX Cub**”, part of the **Department of Mechatronics Engineering**, has planned to host a technical session on **16/11/2024(Monday)** “**Project Demonstration**” for department students. Students are hereby instructed to participate in the event and enhance their technical and practical knowledge.

PROGRAMME COORDINATOR

(Mr. S. Prakash)

HOD/MCTR

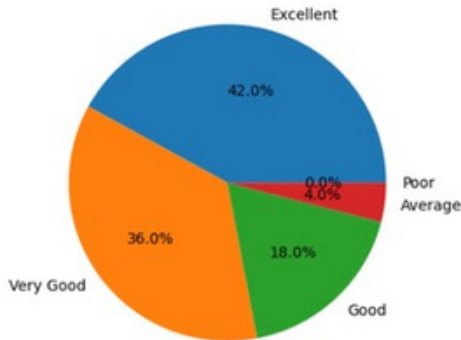
(Dr. G.B.M. Mohan Raj)

PHOTO GALLERY



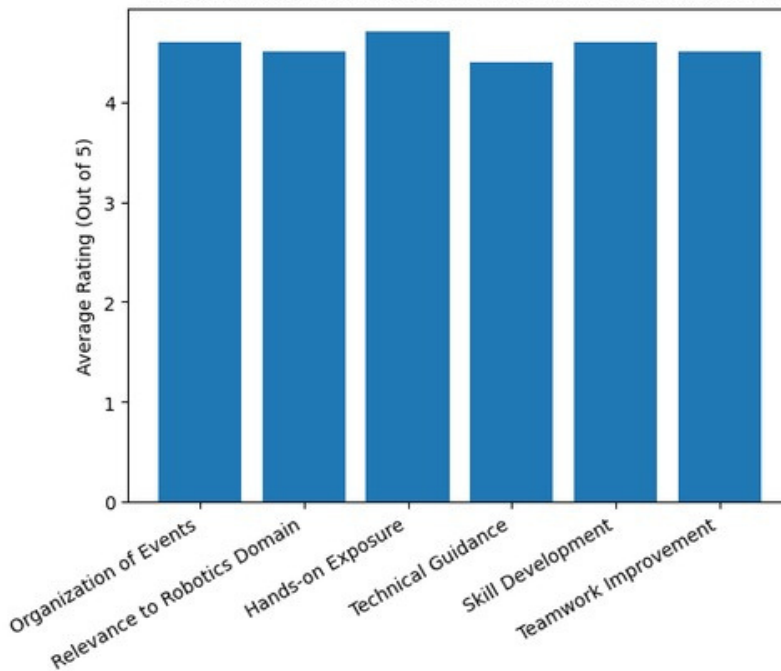
STUDENT FEEDBACK

Overall Student Satisfaction on Robotics and Automation Club Activities (2024-2025)



The pie chart depicts the overall satisfaction level of students regarding the Robo TecX Club activities conducted during the academic year 2024–2025. It is observed that 78% of students rated the activities as Excellent or Very Good, indicating a high level of satisfaction. Only 4% rated the activities as Average, and no negative feedback was recorded.

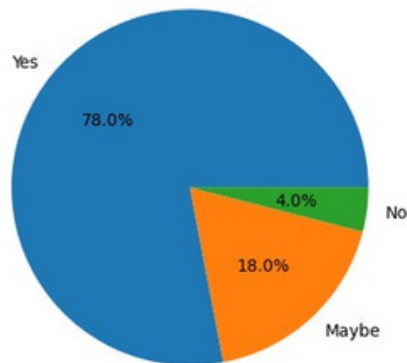
Effectiveness of Robotics and Automation Club Activities



The bar chart represents the average ratings given by students for various effectiveness parameters. The ratings are consistently above 4.4 out of 5, highlighting the club’s strong performance in event organization, hands-on exposure, skill development, and teamwork enhancement. The highest rating was observed for hands-on exposure, reflecting the practical orientation of the club activities.

STUDENT FEEDBACK

Recommendation of Club Activities by Students



The pie chart shows that 78% of students are willing to recommend the Robo TecX Club activities to other students, while 18% expressed conditional interest. This clearly demonstrates the positive perception and value of the club among students

