e-Yantra Robotics Lab

(IIT Bombay)

at Our University

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An Initiative by IIT Bombay to Foster Innovation in Robotics & Embedded Systems

Introduction to e-Yantra

e-Yantra is a pioneering initiative by IIT Bombay, supported by the Ministry of Education (MoE), Government of India, aimed at fostering a culture of innovation, robotics, and embedded systems learning in educational institutions. The program provides hands-on experience, industry-aligned projects, and hardware-software integration training to equip students with the skills needed to excel in automation, robotics, and AI-driven technologies.

Our university has proudly established the e-Yantra Lab, enabling students to explore robotics, IoT, AI, and automation through real-world problem-solving. This initiative aligns with our commitment to cutting-edge technology education and interdisciplinary learning.
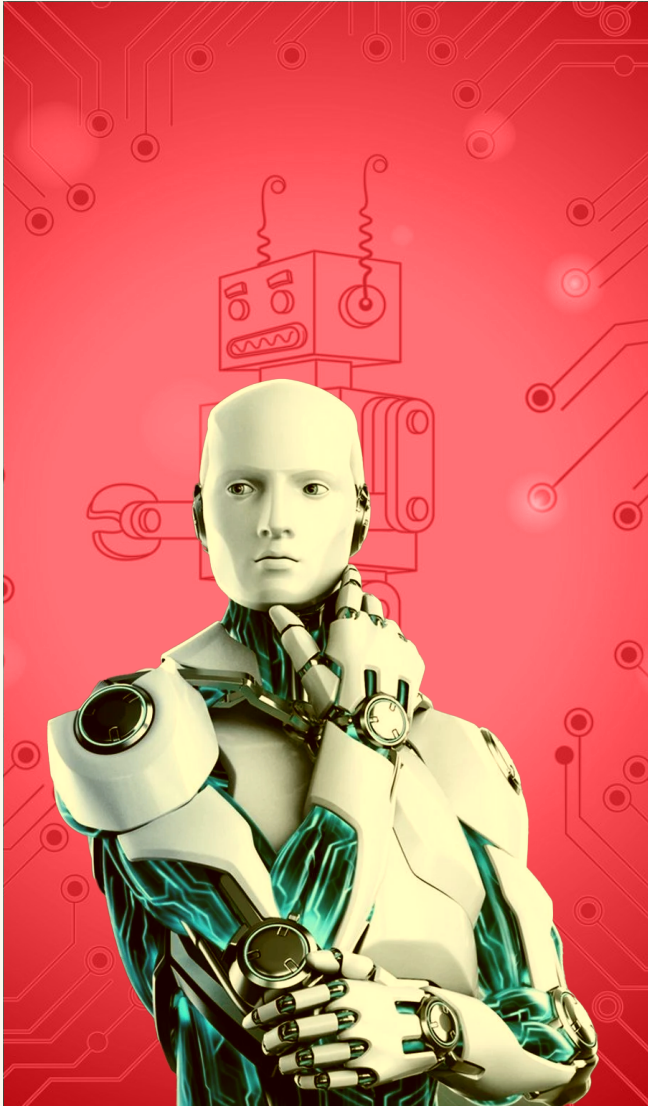
Objectives of e-Yantra (IIT Bombay) at Our University

- 🎯 Bridging the gap between theory & practice through robotics-based learning.

- 🎯 Encouraging innovation & problem-solving via project-based challenges.

- 🎯 Training students & faculty in embedded systems, AI, IoT, and automation.

- 🎯 Preparing students for industry & research opportunities in robotics.

- 🎯 Participation in national-level competitions organized by IIT Bombay.

Key Components of e-Yantra

e-Yantra Lab Setup Initiative (eLSI)

Our university has partnered with IIT Bombay under the e-Yantra Lab Setup Initiative (eLSI), establishing a state-of-the-art Robotics & Embedded Systems Laboratory. The lab provides students with:

- **Development Kits:** Advanced microcontrollers, sensors, actuators, and robotics platforms.

- **Structured Learning Modules:** Self-paced courses on Embedded C, Python for Robotics, ROS (Robot Operating System).

- **Project-Based Learning:** Real-world challenges in agriculture, smart cities, automation, and industrial robotics.

e-Yantra Robotics Competition (eYRC)

Students at our university actively participate in the e-Yantra Robotics Competition (eYRC), an annual event that allows students to apply robotics concepts to solve societal problems. This national-level challenge helps students gain:

- Team-based problem-solving skills
- Real-world exposure to robotics
- applications
- Mentorship from IIT Bombay faculty & industry experts

e-Yantra Innovation Challenge (eYIC)

The e-Yantra Innovation Challenge (eYIC) provides students with a platform to develop innovative solutions using robotics and AI technologies. Our university encourages students to submit their ideas and prototypes, contributing to smart automation solutions for real-world issues.

Role of e-Yantra Coordinator at Our University

The e-Yantra Lab at our university is guided by Dr Ankur Kulshreshtha, who serves as the mentor and facilitator for students and faculty members.

Responsibilities include:
- Organizing hands-on training workshops on robotics & embedded systems.
- Guiding students in project-based learning & national-level competitions.
- Facilitating industry collaboration & research opportunities in automation.
- Enhancing interdisciplinary learning through AI, IoT, and robotics applications.

Impact & Future Goals

Impact & Future Goals
- Since its inception, the e-Yantra Lab has empowered students with:
- Practical robotics experience through hands-on projects.
- Participation & recognition in national and international competitions.
- Enhanced employability in AI, automation, and robotics industries.

Looking ahead, our university aims to:
- Expand the e-Yantra Lab with advanced robotic systems.
- Develop industry-collaborated research projects in AI & automation.
- Host robotics hackathons & IoT-based innovation challenges.

Conclusion

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The e-Yantra Lab at our university, in collaboration with IIT Bombay, serves as a hub for robotics research, hands-on learning, and innovation. This initiative not only enhances technical knowledge but also empowers students with the skills required to lead in automation and AI-driven industries.

Join the e-Yantra Revolution & Build the Future of Robotics!

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Contact us

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