

**Vidya Pratishthan's Kamalnayan Bajaj Institute of Engineering and
Technology, Baramati
Department of Artificial Intelligence and Data Science**

INDUSTRIAL VISIT REPORT

Name of Industry/Organization: ISRO – U R Rao Satellite Centre (URSC), Bangalore

Date of Visit : 9th sep, 2025

Visit Coordinator : Mrs. Apurva Mane

Class : T.Y AI & DS

Number of Visitors : 50 students & 4 Faculty members

Objectives of the Visit

The main objectives of this visit were:

- To gain insights into the functioning of ISRO and the role of URSC in satellite missions.
- To understand the process of satellite design, integration, and testing.
- To learn about advanced technologies such as communication systems, payload integration, and satellite subsystems.
- To interact with scientists and engineers and understand real-world applications of classroom concepts.
- To motivate students towards research, innovation, and careers in space science and engineering.

Report:

Activities During the Visit

During the Industrial visit, students were given a comprehensive overview of ISRO's projects and achievements. The activities included:

- **Presentations and Briefings** – Officials from URSC presented the history of ISRO, milestones in satellite development, and India's achievements in space exploration.
- **Facility Tour** – Students were taken to different labs and integration units where satellites are assembled, tested, and prepared for launch.
- **Demonstrations** – Demonstrations on satellite subsystems such as power systems, communication modules, payloads, and thermal control systems were provided.
- **Interaction Sessions** – Students interacted with ISRO scientists and engineers, who explained the working environment, challenges faced during satellite development, and innovative solutions applied.
- **Satellite Projects** – Ongoing projects such as navigation satellites, communication satellites, and earth observation systems were showcased, along with the recently launched missions.



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Learnings

The visit offered several technical and managerial insights, such as:

- **Satellite Assembly and Integration** – Understanding how multiple subsystems (power, communication, propulsion, attitude control) are integrated into a single working satellite.
- **Testing Procedures** – Exposure to thermal vacuum testing, vibration testing, and space simulation environments used to ensure satellites withstand launch and space conditions.
- **Communication Systems** – Learning how satellites enable telecommunication, broadcasting, GPS, and disaster management services.
- **Payload Integration** – Understanding how different payloads (scientific instruments, cameras, sensors) are designed and fitted to achieve mission objectives.
- **Project Management** – Insights into teamwork, precision, planning, and the interdisciplinary collaboration required in space missions.
- **Applications of Classroom Knowledge** – Concepts from electronics, computer science, mechanical engineering, and physics were observed being applied in real satellite projects.

Outcomes and Benefits

The industrial visit had several academic and professional benefits:

- Enhanced understanding of satellite technology and its real-world applications.
- Inspiration and motivation to pursue careers in aerospace, defense, and research organizations.
- Improved knowledge of advanced engineering practices, testing, and quality assurance in high-tech industries.
- Development of problem-solving and innovative thinking by learning how ISRO overcomes technological challenges.
- A sense of national pride in India's achievements in space exploration and self-reliance in satellite technology.

Conclusion

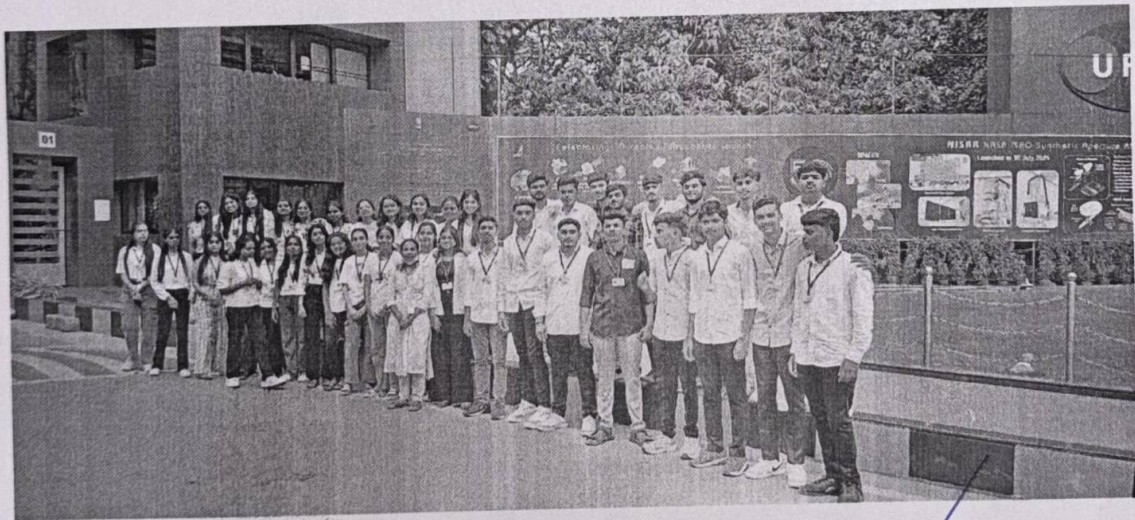
The visit to ISRO – URSC, Bangalore was a highly enriching and inspiring experience. It provided students with an opportunity to witness the cutting-edge technologies and processes involved in satellite design and development. The interactions with scientists and engineers offered valuable career guidance and insights into the rigorous efforts behind India's space missions.

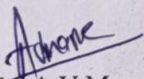
We extend our sincere gratitude to ISRO and URSC for allowing us this educational opportunity, to our institution for organizing the visit, and to the faculty coordinators who guided us throughout the program. This visit not only enhanced our technical knowledge but also instilled in us a deep motivation to contribute to the nation's progress in science and technology.

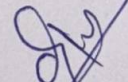


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Glimpse of Visit




Mrs. A. V. Mane,
Dept of AI&DS
IIC-Co-ordinator


Dr. C. S. Kulkarni
Dept of AI&DS
HOD