



K.S. INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



REPORT ON

Industrial visit to U R Rao Satellite Center (ISRO)

Semester	1 st Semester
Event Type	Industrial visit
Event Name	Industrial visit
Date/Duration	24 th December 2025
Associated Professional Bodies	U R Rao Satellite Center ISRO (URSC), Bengaluru
No. of Students	122
Online link/Offline	Offline

Introduction:

This Industrial Visit organized by ,Department of AI&ML, K.S. Institute of Technology aims to bridge the gap between theoretical knowledge and real-world Exposure by Organizing visit to U R Rao Satellite center (URSC), Bengaluru.

Overview of Industrial visit:

- **Purpose:** To gain practical insights into the functioning of a real-world industry and understand how theoretical concepts are applied in a practical setting.
- **Activities:** Observing the processes, and potentially interacting with industry professionals to learn about their roles and experiences.
- **Benefits:** This visit will help you understand the industry's operations, gain practical knowledge, and potentially explore future career paths.
- **Remember:** Be observant, ask questions, and take notes to maximize your learning experience.

Objective of the Industrial Visit:

The primary objective of an ISRO industry visit report is to document the experience, highlighting the practical exposure gained by students to space technology, its applications, and the potential career paths within the field, while also showcasing ISRO's achievements and advancements.

Industrial visits help students pursuing professional education gain hands-on experience in executing industry operations. Industry visits bridge the gap between theoretical training and practical learning in a real-life environment.

Topics Covered:

- **ISRO's Role and Objectives:**

To Understand ISRO's mandate, its evolution, and its contribution to India's socio-economic development through space technology. ISRO (Indian Space Research Organization) harnesses space technology for India's national development, focusing on societal applications like communication, navigation (NavIC), and disaster management, alongside scientific goals of planetary exploration (Moon, Mars) and enhancing indigenous technology, all while promoting self-reliance and global cooperation in space. Its key roles involve designing launch vehicles (PSLV, GSLV, SSLV) and satellites, operating space systems, conducting research, and using space-based data for resource management and urban planning.

- **India's Space Program:**

Study the key missions, including Chandrayaan, Mangalyaan, Gaganyaan, and Aditya- L1, understanding their objectives and outcomes.

India's space program, led by ISRO, began in the 1960s with a focus on national development through telecommunications, remote sensing, and navigation, achieving milestones like the first satellite (Aryabhata, 1975) and Mars mission (Mangalyaan). Now, with growing private sector involvement, it's expanding to human spaceflight (Gaganyaan) by 2027, a space station by 2035, and deeper lunar exploration, aiming for self-reliance and global leadership in cost-effective space tech.

- **Satellite Communication and Navigation**

Satellite Communication (SatCom) and Navigation (SatNav) systems use orbiting satellites to provide global connectivity, broadcasting, and precise Positioning, and critical infrastructure management (power grids, finance).

ISRO plays a crucial role in Satellite Communication (SatCom) and Navigation, providing vital services through its INSAT/GSAT constellation for TV, telecom, disaster management (like Telemedicine, Tele-education), and developing NavIC (Navigation with Indian Constellation), India's indigenous regional GPS alternative for accurate positioning, alongside systems like GAGAN for aviation, strengthening self-reliance in space-based tech for societal and strategic needs.

Satellite Communication (SatCom)

INSAT/GSAT System: Operates one of Asia's largest communication satellite systems, offering transponders for broadcasting (DTH, TV), telecommunications, weather, and disaster warning.

Glimpse of the Event



CO/PO Mapping:

CO/PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Industrial Visit	2	-	-	-	-	2	-	-	2	2	-	2	2	2

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DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING INDUSTRIAL VISIT



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