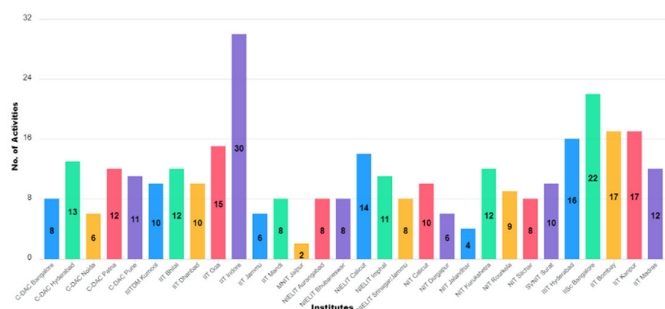




SwaYaan Project

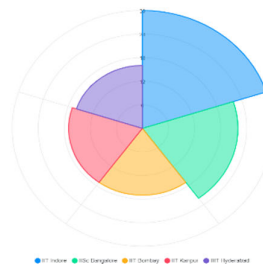
The **SwaYaan project**, sponsored by the **Ministry of Electronics and Information Technology (MeitY)**, is a transformative initiative aimed at building capacity and developing human resources in the rapidly advancing field of **Unmanned Aircraft Systems (UAS)**. This project serves as a key enabler for India's aspirations in drone technology, fostering innovation, and ensuring the availability of a skilled workforce to meet future challenges. Among the 30 institutions participating in the SwaYaan project, IIT Indore has emerged as the top performer, surpassing several renowned participating institutions in its achievements under the work theme of **Drone Electronics**. The project at IIT Indore is led by **Dr. Sumit Gautam**, Assistant Professor, Department of Electrical Engineering, as the Chief Investigator (CI). The Co-Chief Investigators include **Dr. Unmesh Khati**, Assistant Professor, Department of Astronomy, Astrophysics, and Space Engineering (DAASE), as Co-CI-1, and **Dr. Vivek Kanhangad**, Professor, Department of Electrical Engineering, as Co-CI-2.

Activities conducted across Institutes



Source - <https://www.swayaan.meity.gov.in/>

Activity wise Top Performers



Source - <https://www.swayaan.meity.gov.in/>

Bootcamps form the cornerstone of the SwaYaan project, providing intensive training designed to cultivate expertise in UAS technologies. These bootcamps are meticulously structured to deliver both theoretical knowledge and practical skills, ensuring that participants are well-equipped to handle the complexities of drone technology in real-world scenarios. Each bootcamp spans six days, comprising more than 40 hours of instruction. Participants engage in 22 theory sessions and 11 hands-on practical sessions. This combination of classroom learning and practical experience ensures that participants gain a holistic understanding of UAS technology. The bootcamps cover a wide range of topics, including **drone operations, drone applications, safety protocols, and regulatory frameworks**. The curriculum is designed to provide a comprehensive understanding of the UAS ecosystem, from the basics of drone design to advanced topics like **flight dynamics, mission planning, and payload integration**. Special emphasis is placed on **safety and regulatory aspects, preparing participants to operate drones within the legal framework and ensuring compliance with national and international standards**. The practical sessions are a critical component of the bootcamp, offering participants the opportunity to apply theoretical knowledge in real-world scenarios. Participants engage in activities such as **assembling drones, conducting flight tests, and executing mission-specific tasks**. This hands-on approach not only enhances learning but also builds confidence, enabling participants to handle complex UAS operations independently.

Since the project's inception on September 22, 2022, IIT Indore has conducted 12 batches of bootcamps, **successfully training 445 students** in UAS technology. With a total of 36 batches planned, the project is well on its way to meeting its **target of training over 1,000 participants** by its conclusion. Through its comprehensive bootcamps, innovative Proof of Concepts (PoCs), and emphasis on IPR and publications, SwaYaan is not only building a skilled workforce but also driving technological advancements that will have a lasting impact on the drone industry. The recognition of **IIT Indore as the top performer** among prestigious institutions underscores the project's success and its potential to **position India at the forefront of global UAS innovation**.

The institute is planning to organize similar bootcamps in collaboration with other institutions. Those interested can contact us at eo-ctr@iiti.ac.in



