PSIT Kanpur

PRANVEER SINGH INSTITUTE OF TECHNOLOGY
Approved by AICTE, PCI and Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow (U.P.)
Campus: Kanpur-Agra-Delhi National Highway (NH-19), Bhauti, Kanpur 209 305
Ph.: +91-512-2696244, 2696248 | Email: info@psit.ac.in
Admin. City Office: 117/H-1/315, Model Town, Pandu Nagar, Kanpur 208 005 | Ph.: 0512 223 0044, 223 0066, 0512 224 0000

IoT CLUB - PSIT

EVENT REPORT
SEPTEMBER-2025

PSIT Kanpur

PRANVEER SINGH INSTITUTE OF TECHNOLOGY
Approved by AICTE, PCI and Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow (U.P.)
Campus: Kanpur-Agra-Delhi National Highway (NH-19), Bhauti, Kanpur 209 305
Ph.: +91-512-2696244, 2696248 | Email: info@psit.ac.in
Admin. City Office: 117/H-1/315, Model Town, Pandu Nagar, Kanpur 208 005 | Ph.: 0512 223 0044, 223 0066, 0512 224 0000

IoT Gems 8.0 Hands-on Training on Drone Technologies

BRIEFING ABOUT THE EVENT: IoT GEMS 8.0 HANDS-ON TRAINING ON DRONE TECHNOLOGIES

The PSIT IoT Club successfully conducted an engaging and insightful workshop titled "IoT Gems 8.0 – Hands-on Training on Drone Technologies", aimed at introducing students to the fundamentals and advanced concepts of drone technology and its integration with IoT systems.

This practical-oriented session provided participants with a strong foundation in the working principles of drones, including components, flight dynamics, remote control systems, and real-world applications in fields such as agriculture, surveillance, logistics, and disaster management. The workshop emphasized hands-on training, allowing students to directly engage with drone hardware, understand flight control mechanisms, and explore how IoT enhances drone capabilities through data transmission and automation.

Through a blend of technical demonstrations, interactive learning, and real-time drone flying sessions, participants gained valuable skills and exposure to one of the most rapidly evolving areas of technology. The workshop not only enriched their understanding of drone-based IoT solutions but also encouraged innovation, teamwork, and problem-solving in a tech-driven environment.

OBJECTIVES OF THE EVENT

- To introduce students to the fundamentals of drone technology, including components, flight principles, and control systems.
- To demonstrate the integration of Internet of Things (IoT) with drone systems for real-time data collection, automation, and remote monitoring.
- To provide hands-on experience in assembling, configuring, and operating drones through practical sessions and live demonstrations.
- To explore real-world applications of drone technologies in sectors such as agriculture, surveillance, disaster management, and logistics.
- To enhance students' technical and problem-solving skills by engaging them in interactive learning activities involving drone control and IoT-based solutions.
- To foster innovation and teamwork by encouraging participants to collaborate on drone-related tasks and projects during the training.

MAPPING WITH PO

PO1: Apply the knowledge of mathematics, science, Electronics & Communication engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO5: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex Electronics & Communication engineering activities with an understanding of the limitations.

PO9: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO11: Demonstrate knowledge and understanding of the Electronics & Communication engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

The event **"IoT Gems 8.0 – Hands-on Training on Drone Technologies"** significantly mapped with the specified Program Outcomes. Through immersive sessions and practical demonstrations, students applied their knowledge of electronics, communication systems, and control mechanisms, aligning closely with **PO1**. The hands-on nature of the workshop encouraged participants to engage directly with modern drone and IoT tools, fostering technical proficiency and tool-based learning as outlined in **PO5**.
Team-based drone activities promoted collaboration and effective communication, fulfilling **PO9**, while also nurturing leadership qualities as participants took initiative, coordinated tasks, and made decisions in real-time scenarios. The structured learning environment introduced basic project planning and execution, mirroring the essence of **PO11**, where students learned to balance technical responsibilities with teamwork and time management. Furthermore, the exposure to rapidly evolving drone technologies and IoT applications underscored the importance of **lifelong learning (PO12)**, encouraging participants to adapt to ongoing technological advancements. Overall, the workshop reinforced practical engineering application, team dynamics, and adaptability, demonstrating a strong alignment with the program outcomes.

EVENT ORGANIZED BY

IoT Club, PSIT had organized the Event – IoT Gems 8.0 – Hands-on Training on Drone Technologies on 27th September 2025 at 10:00am at J-33 Lab.

Organizing Team:

- Club Ambassador: Mr. Ankit Jain, Assistant Professor, Department of ECE, PSIT.
- Student Coordinators: Aniket Kumar (EC-IV-A), Swarnim Shukla (EC-IV-B), Yash Chaudhary (EC-IV-B), Swastik Singh (EC-III-B).

EVENT DETAILS

The event was organized in the Electronics Lab, J-33, at PSIT on 27th September 2025, starting at 10:00 AM. The workshop commenced with a welcome note and an introduction to the PSIT IoT Club, followed by engaging sessions on the fundamentals of drone technology, including drone components, flight mechanics, and the integration of drones with IoT systems.

The highlight of the event was the hands-on training session, where participants assembled, configured, and operated drones, gaining firsthand experience in drone control and real-time applications. The event concluded with a Drone Control and Application Challenge, where students demonstrated their understanding through practical tasks. Winners were awarded prizes, and certificates of participation were distributed to all attendees, recognizing their active involvement and learning.

DURATION OF THE EVENT

The event began at 10:00 AM and wrapped up at 02:00 PM.

FORMAT

- The workshop was conducted in a single comprehensive session, which included interactive lectures, live drone demonstrations, and a practical challenge to reinforce key concepts.
- After the theoretical sessions, a dedicated drone flying session was organized, allowing participants to experience real-time drone operation, practice flight control, and observe the practical implementation of learned concepts.
- Each participant was provided with a dedicated workstation and access to drone simulation software, ensuring individual hands-on experience during the training activities.
- The Drone Control and Application Challenge was held as the concluding activity, where students performed specific tasks such as stable hovering, obstacle navigation, and mission-based execution within a set time frame.
- Entries were evaluated based on flight stability, task completion, and the application of drone control principles, reflecting participants' understanding of both theoretical knowledge and practical execution.

PARTICIPANTS:

S. No.	List Of Participants	Roll Number	Department
1	VANI SHUKLA	2401640310069	ECE
2	SANSKRITI SRIVASTAVA	2401640310055	ECE
3	AMIT NARAYAN SINGH	2301640310016	ECE
4	NISHCHAL ARYA	2401641520114	CS-AI
5	ADITYA ARORA	2401641530012	CS-AI
6	SREE SINGH	2401640310058	ECE
7	VAGEESHA KUMARI	2401640310068	ECE
8	ADITI SINGH	2401640100063	CS
9	ASTHA SINGH	2401641520051	CS-AI

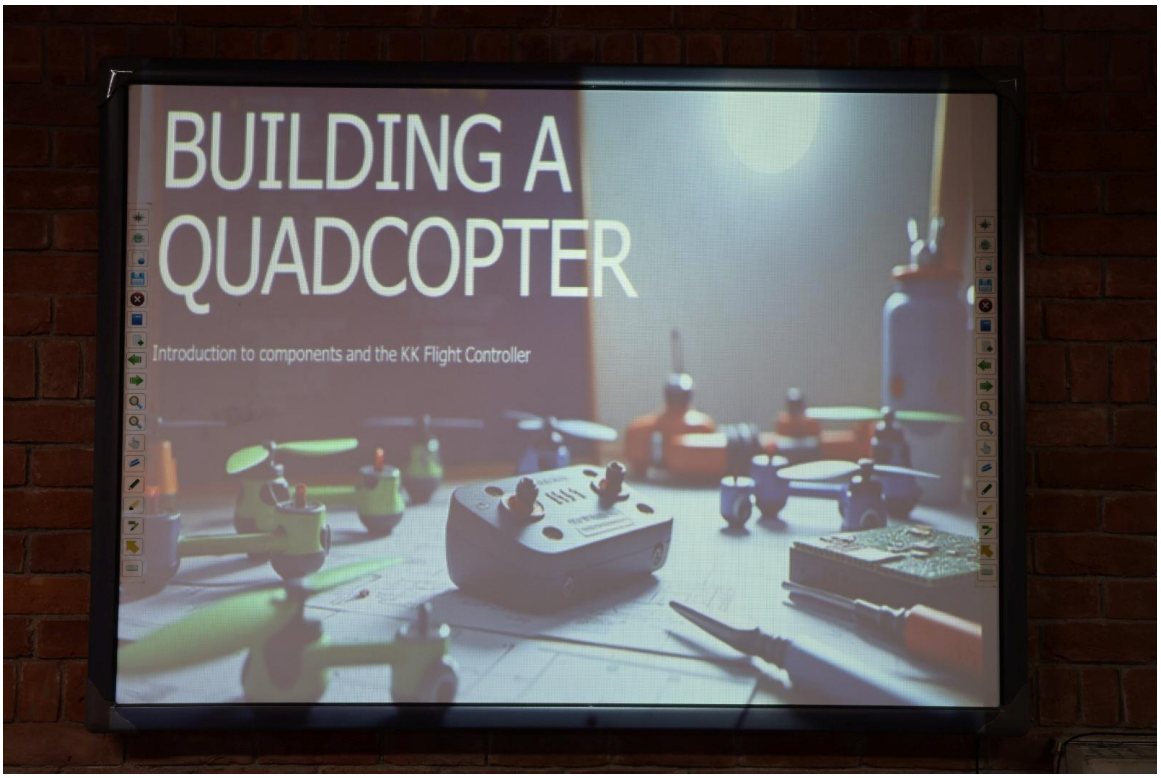
10	ADITYA SHARMA	2401640310006	ECE
11	PRIYAM SINGH PATEL	2401640100757	ECE
12	URVASHI GUPTA	2401640101092	CS
13	AYUSH YADAV	2401640100402	CS
14	JIYA	2401640310033	ECE
15	AMAN TRIVEDI	2401640310011	ECE
16	AJITESH CHURASIA	2401640100109	CS
17	SHIKHA	2301640310118	ECE
18	SAURABH KUMAR	2301640310116	ECE
19	DEVANSH GUPTA	2401640310024	ECE
20	DEEKSHA RANI	2401640310023	ECE
21	SHIVAN YADAV	2401640310057	ECE
22	PIYUSH NISHAD	2401640310042	ECE
23	AKSHAT JAIN	2401640310009	ECE
24	RISHI RAJ NIGAM	2401640310051	ECE
25	SUNIDHI SINGH	2401640310065	ECE
26	SHREYA GUPTA	2301640310126	ECE
27	SARTHAK TRIVEDI	2301640310111	ECE
28	SAUMYA KATIYAR	2301640310114	ECE
29	UJJAWAL GUPTA	2301640310137	ECE
30	MILAN KUSHWAHA	2301640310079	ECE
31	SIDDHANT SINGH	2401640101015	CS
32	KRISHNA VERMA	2301640310072	ECE
33	NITIN AGRAHARI	2301640310088	ECE
34	UDAY GUPTA	2301640310136	ECE
35	ABHINAV SINGH	2301640310002	ECE
36	ANSHIT VERMA	2401640310013	ECE
37	SUMIT SRIVASTAVA	2401640310064	ECE
38	HRADYANSH SHUKLA	2301640310064	ECE

39	KARTIKEY GUPTA	2301640310069	ECE
40	MISHTHI CHAURASIA	2301640310080	ECE
41	DISHA SINGH CHAUHAN	2401640310026	ECE
42	SHREYA KATIYAR	2401640310059	ECE
43	YASHI TIWARI	2301640310146	ECE
44	RAKHI GAUTAM	2301640310099	ECE
45	ATHARVA GUPTA	2401640310018	ECE
46	MUDIT GURHA	2201640310071	ECE
47	UJJAWAL SHUKLA	2301640310138	ECE
48	MILAN TIWARI	2301640310080	ECE
49	SIDDHANT SINGH	2401640101016	CS
50	KRISHNA SHARMA	2301640310074	ECE

FLOW OF THE EVENT

- Welcome Address and Introduction to PSIT IoT Club
- Overview of Drone Technology and IoT Integration
- Explanation of Drone Components, Flight Mechanics, and Control Systems
- Live Drone Demonstration and Practical Flight Session
- Hands-on Workshop with Drone Simulation Software and Hardware
- Drone Control and Application Challenge
- Closing Remarks

The photographs of the event are attached.


BUILDING A
QUADCOPTER
Introduction to components and the KK Flight Controller


COMPONENTS


Dream is not that which you see while sleeping
it is something that does not let you sleep.


PSIT


KIDAR
Mission 1 - Disaster Management


Dream is not that which you see while sleeping
it is something that does not let you sleep.
Dr. A.P.J. Abdul Kalam


BUILDING A
QUADCOPTER
Introduction to components and the KK Flight Controller
PSIT
IoT Club


Dream is not that which you see while sleeping
it is something that does not let you sleep.


PSIT
Dream is not that which you see while sleeping
it is something that does not let you sleep.


PSIT
Dream is not that which you see while sleeping
it is something that does not let you sleep.

WINNERS OF THE COMPETITION

The winners of the Drone Control and Application Challenge were recognized and applauded for their innovation and technical proficiency. E-Certificates of participation were distributed to all attendees, acknowledging their enthusiastic involvement and learning.

1. **WINNER** – VANI SHUKLA (ECE) (II-YEAR)
2. **FIRST RUNNER UP** – SANSKRITI SRIVASTAVA (ECE) (II-YEAR)
3. **SECOND RUNNER UP** – AMIT NARAYAN SINGH (ECE) (III-YEAR) (SEC-A)

OUTCOME OF THE EVENT

The workshop successfully achieved its objective of imparting practical knowledge on drone technologies and their integration with IoT systems. Students gained a deeper understanding of drone components, flight control mechanisms, and real-world applications across various industries. The hands-on sessions encouraged teamwork, innovation, and problem-solving. Overall, the event enhanced participants' confidence in working with drone hardware and IoT platforms, while highlighting the growing significance of drone technology in modern technological advancements.

Thanks & Regards
Ankit Jain
IoT Club Ambassador
Assistant professor
Department of ECE
Pranveer Singh Institute of Technology, Kanpur