



दीन दयाल उपाध्याय कॉलेज DEEN DAYAL UPADHYAYA COLLEGE (दिल्ली विश्वविद्यालय) (UNIVERSITY OF DELHI)

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DDUC ACM STUDENT CHAPTER

REPORT **“Drone Technology Workshop”** **Under** **DDUC ACM STUDENT CHAPTER** **In Collaboration with Farata Technologies**

KEY HIGHLIGHTS:

DATE : 22 October 2024

TIMING : 11:00 A.M.

VENUE : Seminar Hall (Room No. 509), Deen Dayal Upadhyaya College, New Delhi

NO OF PARTICIPANTS : 76

Faculty Sponsor, DDUC ACM Student Chapter :

Dr. Rajni Bala

Session Coordinators :

Dr. Rajni Bala

Prof. Ram Pal Singh

Mr. Sanjeet Kumar

Introduction:

On [insert date], the 22 October Student Chapter organized a comprehensive Drone Technology Workshop to introduce students to the rapidly advancing world of drone technology. The event aimed to provide attendees with a foundational understanding of drone mechanics and their increasing impact in various industries. By focusing on the core components and functions of drones, the workshop equipped students with knowledge about how these devices operate and the vital role they play in modern-day technology.

The workshop attracted a large and diverse audience, including students from multiple academic backgrounds, which underscored the growing relevance of drone technology across numerous fields. Designed to be interactive, the session included detailed explanations, practical demonstrations, and insights into the real-world applications of drones, from agriculture to public safety. This multifaceted approach made the event both engaging and informative, helping attendees appreciate the potential of drones to transform industries and drive innovation.

Event Structure:

1. Drone Mechanics Demonstration:

The workshop began with a live demonstration led by Mr. Sandeep Sangwan, Director of Farata Technologies, where students were introduced to the core components of a drone, including the frame, propellers, motors, GPS modules, and the central processing unit. Mr. Sangwan explained each component's function in detail—how the frame provides stability, the propellers generate lift, and the motors enable movement and speed control. He highlighted the GPS modules' role in navigation and precise positioning, while emphasizing the central processing unit as the “brain” that synchronizes these parts, enabling the drone's coordinated operation. This demonstration provided attendees with a clear understanding of how each part contributes to a drone's agility and functionality, bringing the technology to life in a tangible and engaging way.

2. Insight into Drone Applications and Industry Growth:

Expanding on the various applications of drone technology, the speaker shed light on the expanding scope of the drone industry. He explained how drones have become essential tools for saving time, reducing costs, and minimizing labour by efficiently executing tasks that were previously challenging or extremely time-consuming.

Through examples of their applications, Mr. Sangwan illustrated how drones have revolutionized various sectors.

- In agriculture, for instance, drones can quickly survey expansive fields, providing farmers with critical data on crop health and soil conditions. This capability allows for more precise farming practices, leading to improved yields and better resource management. In the realm of public safety, drones play a vital role in search and rescue operations, offering aerial perspectives that enable emergency responders to assess situations more effectively and act swiftly in critical scenarios.
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- Furthermore, he highlighted how drones are being utilized in mining operations to monitor and map remote locations, enhancing safety and efficiency. In environmental monitoring, drones are deployed to assess wildlife populations and track changes in ecosystems, contributing to conservation efforts.

Mr. Sangwan emphasized that the efficiency of drones, combined with rapid technological advancements, has significantly increased their adoption across various sectors. He encouraged students to explore the vast potential of this field, urging them to understand that drones are not just tools but powerful agents of change that can transform industries. He concluded by inspiring students to consider pursuing training programs and certifications that could enhance their skills and prepare them for future roles in this dynamic and rapidly evolving landscape.

3. Live Flying Demonstration

To further enhance the participants' understanding of drone technology, the workshop featured a captivating live flying demonstration. Attendees witnessed firsthand how the various components of a drone worked together in real-time as the drone took to the skies, showcasing its agility and precision. The demonstration highlighted how the controls correspond to the drone's movements, emphasizing the importance of skilful operation and safety measures.

Conclusion:

At the end, Mr. Sangwan urged students to explore the expanding opportunities within the drone technology field. He provided a brief outline of the certified training courses offered by Farata Technologies, which cover essential skills and knowledge for aspiring drone professionals. The workshop inspired students to consider careers in drone technology, highlighting its potential to revolutionize various aspects of modern life.

The event successfully illustrated how drone technology intersects with multiple industries, emphasizing its impact beyond engineering. By attracting students from diverse academic backgrounds, the workshop reinforced the idea that technology is a transformative force affecting many fields, including agriculture, public safety, and environmental conservation encouraging attendees to engage with the evolving landscape of drone technology and consider their role in driving future innovations.



