



**DHOLE PATIL EDUCATION SOCIETY'S**  
**DHOLE PATIL COLLEGE OF ENGINEERING**



## **Department of Electronics & Telecommunication Engineering**

### **DRONE TECHNICAL CLUB**



**CLUB ADVISOR**

Prof. Neha Dumne

Department of E&TC Engineering



**Dhole Patil College of Engineering** is an Engineering college located in Pune. This institute was found in 2008 with the objective to provide good quality technical education to students and guide their career to a good path. It was found by **Shri Sagar U. Dhole Patil**, a well-known businessman and athlete who also lends a hand in the social and professional spheres. This institute does not only boost the students' knowledge but opens opportunities in multiple industries and chances to gain practical knowledge. The technical club activities offer invaluable practical knowledge, with our esteemed Chairman, **Shri Sagar U. Dhole Patil**, at the helm of this commendable initiative.

**Technical clubs** are established to align with various trending streams. Participation is open to every student in the college. Each club operates with an interdisciplinary committee, fostering cooperative engagement with all students across the institute. The establishment of **Technical Clubs** necessitates a significant amount of funding to procure essential facilities for students. This endeavor was made achievable through the invaluable support of our chairman, **Shri Sagar U. Dhole Patil**.



**DHOLE PATIL EDUCATION SOCIETY'S**  
**DHOLE PATIL COLLEGE OF ENGINEERING**



**CLUB CORE COMMITTEE**



**PROF. NEHA DUMNE**  
**CLUB ADVISOR**



**SURAJ PAWAR**  
**PRESIDENT**



**ASHISH PAUL**  
**VICE PRESIDENT**



**PRANJALI KHAIRNAR**  
**HOSTEL HEAD**



**MIHIKA ZODAPE**  
**HOSTEL HEAD**

## INDEX

Sr.no	Particulars	Page. No.
1	Introduction	1
	Club Inauguration	1
	Mission & Vision	4
	Club members	5
2	Club Activities	7
	Introduction of Club Money Contribution system	7
	Presentation in Second Year	12
	Drone exhibition in Dhole Patil School of excellence	14
	Induction program for FE students	16
	Introduction of club curriculum lectures for members	23
	Fixed wing RC plane proposal	24
	Curriculum lecture first day	26
	Commencement of RC plane project	28
3	Technical Events	30
	Technoxian world robotics championship, 2k24	30
	Shaurya Expo, 19 September 2024	66
	Student Technical Symposium and exposition, 2024	68
4	Achievement	71
	Technoxian Certificate	71
	Shaurya Expo	72
	Student Technical Symposium and exposition certificate	73



**DHOLE PATIL EDUCATION SOCIETY'S**

**DHOLE PATIL COLLEGE OF ENGINEERING**

Accredited by NAAC with A+ Grade, An ISO 9001:2015 Certified Institute

1284, Near Eon IT Park Kharadi, Dhole Patil College Road, Wagholi, Pune-412207

Website: <https://dpcoepune.edu.in/> E-mail: dpcoepune@gmail.com, Phone:020-66059900

ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>INAUGURATION OF DRONE CLUB</b>	

The grand inauguration of the Drone Technical Club at Dhole Patil College of Engineering was a momentous occasion graced by the esteemed presence of Mr. Uday Dev & Mr. Bhushan Muthiyan, CEO, Automation AI Infosystem Pvt Ltd, Pune, an eminent figure in the field. The event, organized in collaboration with Mr. Ganesh Thorat from Cerebrosparks Pune, was a celebration of technological advancement and a testament to the college's commitment to nurturing innovation. Excitement filled the air as students and faculty gathered, eagerly awaiting the beginning of a new era in drone technology. The ceremony commenced with an awe-inspiring drone demonstration, showcasing the club's expertise and the limitless possibilities that drones offered. In his address, Mr. Uday Dev commended the college's initiative in establishing the Drone Technical Club, emphasizing the importance of practical learning and hands-on experiences. He encouraged the aspiring engineers to push boundaries, explore new horizons, and utilize drones as tools of innovation across various industries



The inauguration marked the beginning of a vibrant community where like-minded individuals would collaborate, learn, and exchange knowledge. The Drone Technical Club aimed to provide a platform for students to enhance their technical skills, engage in research, and participate in competitive events. With the inauguration successfully concluded, the Drone Technical Club at Dhole Patil College of Engineering embarked on its journey, poised to inspire a new generation of engineers to soar to greater heights in the exciting world of drone technology.





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Drone club is a technical platform for students to share their ideas, collaborate with each other to come up with unique solutions and work in teams to prepare drones to serve the society.

**VISION-**

“ To develop full-fledged Drone ecosystem consisting Cloud, Artificial Intelligence and advanced Drones for aerial monitoring and analysis, and share the knowledge along the way! ”

**MISSION-**

1. Provide a platform to learn and experiment on diverse technologies in Drone and Artificial Intelligence.
2. To build advanced and autonomous drones.
3. To make students capable of designing, building, programming robotic systems, drones and peripheral systems.
4. Share knowledge through Workshops, awareness sessions and collaborations.



**CLUB MEMBERS**

**CLUB COUNCIL**

Sr.No	Position	Name	Contact
1	Club President	Suraj Anand Pawar	7385377626
2	Club Vice- President	Ashish Paul	92267 96381
3	Club Treasurer	Harsh Pandey	8766902632

**CLUB MEMBERS**

Sr No	Name	Branch	Contact no	Email id
1.	Prasad Navale	ENTC	9588448498	prasad.b.nawale@gmail.com
2.	Sharad Borle	ENTC	9420794185	sharadborle7@gmail.com
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16.	Manav C	COMP	9322201639	manavc1426@gmail.com
17.	Gholap Siddhika Popat	ENTC	8010777949	Siddhigholap81@gmail.com
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20.	Aditya Somnath Chavan	ENTC	7875401720	aditya.s.chavan2004@gmail.com
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33.	Rutuja Sirsat	ENTC	8237238124	Sirsatrutuja14@gmail.com
34.	Simran Pathan	ENTC	8623998008	Pasimran786@gmail.com
35.	Shoheb Shaikh	ENTC	7499656904	shoheb76shaikh@gmail.com
36.	Harsh Pandey	ENTC	8766902632	Harshp2034@gmail.com
37.	Samarth Khaire	ENTC	9322323281	Samarthkhaire5@gmail.com

ACA/R / 04	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year: 2024-2025
Rev : 00		Semester: ODD SEM
Date: 15.12.2016	<b>NOTICE</b>	<b>Ref: Dept/ACA</b>

**Dear Drone Club Members,**

I hope this message finds you all in good spirits. Following our club meeting on March 29th, we collectively decided to implement a monthly contribution system to bolster our club funds and support our various activities. I am pleased to share the details of this initiative and kick off this new phase.

Commencing from April 4th, each member is kindly requested to contribute an amount ranging from Rs 200 per month. Your financial support will play a vital role in advancing the success and growth of our club.

**Contribution Details:**

-Contribution Range: Rs 200

-Deadline for March Contribution: May 10th, 2024

For those who prefer to pay in cash, please hand over your contribution to Simran Pathan, our club treasurer. Simran can be reached at 8623998008.

If you wish to make an online payment or have any questions, please contact Simran Pathan at the same number.

We kindly ask that you make your contributions by the specified deadline to ensure the seamless operation of our club activities.

As we value transparency, any questions or concerns regarding fund utilization will be openly addressed during our monthly meetings.

Your dedication to the club's prosperity is greatly appreciated, and we look forward to the continued success of our collaborative efforts.

Thank you for your cooperation. Best regards,

Suraj Pawar



**President**  
**Drone Technical Club**

PAYMENT RECORD FOR APRIL MONTH						
S.no.	Name	Department	Amount	Status	Date of Payment	Mode of Payment
1	Ashish Paul	E&TC	200/-	Paid	15-04-2024	Online
2	Gaurav Katare	E&TC	200/-	Paid	15-04-2024	Online
3	Kritika Mishra	E&TC	200/-	Paid	19-04-2024	Online
4	Chinmayee Magar	IT	200/-	Pending		
5	Snehal Bhosale	E&TC	200/-	Pending		
6	Snehal Waghmare	E&TC	200/-	Paid	10-07-2024	Cash
7	Sneha Kakade	E&TC	200/-	Paid	21-04-2024	Online
8	Siddhika Gholap	E&TC	200/-	Paid	15-04-2024	Online
9	Manav Chettier	COMPUTER	200/-	Paid	20-04-2024	Online
10	Om Mohabey	AUTO	200/-	Paid	08-06-2024	Online
11	Prem Bijarne	E&TC	200/-	Paid	20-04-2024	Online
12	Pradnya Jadhav	COMPUTER	200/-	Pending		
13	Purva Patil	E&TC	200/-	Paid	15-04-2024	Online
14	Mansi Patil	E&TC	200/-	Paid	15-04-2024	Online
15	Rutuja Sirsat	E&TC	200/-	Paid		Online
16	Sakshi Chalak	E&TC	200/-	Paid	15-04-2024	Online
17	Ajay Savare	E&TC	200/-	Paid		Cash
18	Harsh Pandey	E&TC	200/-	Paid		Cash
19	Kedar Jagadale	E&TC	200/-	Paid	09-04-2024	Online
20	Suraj Pawar	E&TC	200/-	Paid		Cash
21	Simran Pathan	E&TC	200/-	Paid		Cash
22	Shoheb Shaikh	E&TC	200/-	Paid		Online
23	AbuSufiyan Shaikh	E&TC	200/-	Paid		Online
24	Diksha Gholap	E&TC	200/-	Paid		Online
25	Abhilash Habbu	E&TC	200/-	Paid		Online
26	Mohit Patil	E&TC	200/-	Paid	17-04-2024	Online
27	Aditya Chavan	E&TC	200/-	Pending		
28	Shraddha Jadhav	IT	200/-	Paid	28-04-2024	Online

TOTAL COLLECTION FOR APRIL MONTH: Rs 3000/-

PAYMENT RECORD FOR MAY MONTH						
S.no.	Name	Department	Amount	Status	Date of Payment	Mode of Payment
1	Ashish Paul	E&TC	200/-	Paid	11-05-2024	Online
2	Gaurav Katare	E&TC	200/-	Paid	11-05-2024	Online
3	Kritika Mishra	E&TC	200/-	Paid	31-05-2024	Online
4	Chinmayee Magar	IT	200/-	Pending		
5	Snehal Bhosale	E&TC	200/-	Pending		
6	Snehal Waghmare	E&TC	200/-	Paid	10-07-2024	Cash
7	Sneha Kakade	E&TC	200/-	Pending		
8	Siddhi Gholap	E&TC	200/-	Pending		
9	Manav Chettier	COMPUTER	200/-	Paid	29-05-2024	Online
10	Om Mohabey	AUTO	200/-	Paid	08-06-2024	Online
11	Prem Bijarne	E&TC	200/-	Pending		
12	Pradnya Jadhav	COMPUTER	200/-	Pending		
13	Purva Patil	E&TC	200/-	Paid	03-06-2024	Online
14	Mansi Patil	E&TC	200/-	Paid	15-07-2024	Online
15	Rutuja Sirsat	E&TC	200/-	Pending		
16	Sakshi Chalak	E&TC	200/-	Paid	15-07-2024	Online
17	Ajay Savare	E&TC	200/-	Paid		Online
18	Harsh Pandey	E&TC	200/-	Paid		Online
19	Kedar Jagadale	E&TC	200/-	Paid		Online
20	Suraj Pawar	E&TC	200/-	Paid		Cash
21	Simran Pathan	E&TC	200/-	Paid		Online
22	Shoheb Shaikh	E&TC	200/-	Paid		Online
23	AbuSufiyan Shaikh	E&TC	200/-	Paid		Online
24	Diksha Gholap	E&TC	200/-	Paid		Online
25	Abhilash Habbu	E&TC	200/-	Paid		Online
26	Mohit Patil	E&TC	200/-	Paid		Online
27	Aditya Chavan	E&TC	200/-	Pending		
28	Shraddha Jadhav	IT	200/-	Paid	12-07-2024	Cash

TOTAL COLLECTION FOR MAY MONTH: Rs. 2600 /-

PAYMENT RECORD FOR JUNE MONTH						
S.no.	Name	Department	Amount	Status	Date of Payment	Mode of Payment
1	Ashish Paul	E&TC	200/-	Paid	07-06-2024	Online
2	Gaurav Katare	E&TC	200/-	Paid	12-06-2024	Online
3	Kritika Mishra	E&TC	200/-	Paid	12-06-2024	Online
4	Chinmayee Magar	IT	200/-	Pending		
5	Snehal Bhosale (Left)	E&TC	200/-	Pending		
6	Snehal Waghmare	E&TC	200/-	Pending		
7	Sneha Kakade (Left)	E&TC	200/-	Pending		
8	Siddhi Gholap	E&TC	200/-	Pending		
9	Manav Chettier	COMPUTER	200/-	Pending		
10	Om Mohabey	AUTO	200/-	Paid	08-06-2024	Online
11	Prem Bijarne (Left)	E&TC	200/-	Pending		
12	Pradnya Jadhav	COMPUTER	200/-	Pending		
13	Purva Patil	E&TC	200/-	Paid	03-06-2024	Online
14	Mansi Patil	E&TC	200/-	Paid	15-07-2024	Online
15	Rutuja Sirsat	E&TC	200/-	Pending		
16	Sakshi Chalak	E&TC	200/-	Paid	15-07-2024	Online
17	Ajay Savare	E&TC	200/-	Paid	01-06-2024	Online
18	Harsh Pandey	E&TC	200/-	Paid	01-06-2024	Online
19	Kedar Jagadale	E&TC	200/-	Paid	01-06-2024	Online
20	Suraj Pawar	E&TC	200/-	Paid	01-06-2024	Cash
21	Simran Pathan	E&TC	200/-	Paid	01-06-2024	Online
22	Shoheb Shaikh	E&TC	200/-	Paid	01-06-2024	Online
23	AbuSufiyan Shaikh	E&TC	200/-	Paid	01-06-2024	Online
24	Diksha Gholap	E&TC	200/-	Paid	01-06-2024	Online
25	Abhilash Habbu	E&TC	200/-	Paid	01-06-2024	Online
26	Mohit Patil	E&TC	200/-	Paid	01-06-2024	Online
27	Aditya Chavan	E&TC	200/-	Pending		
28	Shraddha Jadhav	IT	200/-	Paid	12-07-2024	Cash

TOTAL COLLECTION FOR JUNE MONTH: Rs. 3600 /-

PAYMENT RECORD FOR JULY MONTH						
S.no.	Name	Department	Amount	Status	Date of Payment	Mode of Payment
1	Ashish Paul	E&TC	200/-	Pending		
2	Gaurav Katare	E&TC	200/-	Pending		
3	Kritika Mishra	E&TC	200/-	Paid	06-07-2024	Online
4	Chinmayee Magar	IT	200/-	Pending		
5	Snehal Waghmare	E&TC	200/-	Pending		
6	Siddhi Gholap	E&TC	200/-	Pending		
7	Manav Chettier	COMPUTER	200/-	Paid	16-08-2024	Online
8	Om Mohabey	AUTO	200/-	Paid	17-08-2024	Online
9	Pradnya Jadhav	COMPUTER	200/-	Pending		
10	Purva Patil	E&TC	200/-	Paid	16-08-2024	Online
11	Mansi Patil	E&TC	200/-	Pending		
12	Rutuja Sirsat	E&TC	200/-	Pending		
13	Sakshi Chalak	E&TC	200/-	Paid	17-08-2024	Online
14	Ajay Savare	E&TC	200/-	Pending		
15	Harsh Pandey	E&TC	200/-	Pending		
16	Kedar Jagadale	E&TC	200/-	Pending		
17	Suraj Pawar	E&TC	200/-	Pending		
18	Simran Pathan	E&TC	200/-	Pending		
19	Shoheb Shaikh	E&TC	200/-	Pending		
20	AbuSufiyan Shaikh	E&TC	200/-	Pending		
21	Diksha Gholap	E&TC	200/-	Pending		
22	Abhilash Habbu	E&TC	200/-	Pending		
23	Mohit Patil	E&TC	200/-	Pending		
24	Aditya Chavan	E&TC	200/-	Pending		
25	Shraddha Jadhav	E&TC	200/-	Paid	12-07-2024	Cash

TOTAL COLLECTION FOR JULY MONTH: Rs. 1200 /-

ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>DRONE CLUB PRESENTATION IN SECOND YEAR</b>	Date: 05/07/2024



The Department of Electronics and Telecommunication (E&TC) at Dhole Patil College of Engineering (DPCOE) recently hosted an informative presentation about drones and the activities of the Drone Club. This event aimed to enlighten students about the exciting world of drone technology and the club's significant achievements.

The presentation began with an overview of drones, covering their basic functionalities, types, and various applications across industries. It provided the students with a solid understanding of how drones are revolutionizing fields such as agriculture, surveillance, logistics, and entertainment.

The Drone Club at DPCOE offers a variety of opportunities and resources for students interested in drone technology. The club provides hands-on workshops and training sessions where students can learn to build and pilot drones. Members also have access to state-of-the-art equipment and software, allowing them to work on innovative projects and develop their technical skills. The club fosters a collaborative environment, encouraging members to share knowledge, work on group projects, and participate in competitions.





The presentation concluded with an invitation for interested students to join the Drone Club, encouraging them to participate in upcoming events and contribute to future projects. The session was well-received, sparking curiosity and enthusiasm among the E&TC students about the possibilities within drone technology and the opportunities offered by the Drone Club at DPCOE.

ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>DRONE EXHIBITION IN DHOLE PATIL SCHOOL FOR EXCELLENCE</b>	Date: 10/08/2024





The Drone Exhibition at Dhole Patil School for Excellence, held on August 10, 2024, was a significant milestone for the 7th-grade students who organized the event. Supported by the Drone Club from Dhole Patil College of Engineering, the exhibition was a testament to the students' dedication and the mentors' guidance. Attendees were treated to a variety of drone demonstrations, engaging presentations, and hands-on sessions, showcasing the potential and versatility of drone technology. This collaborative effort not only educated the audience but also provided a platform for young innovators to shine, marking a successful and inspiring event.

ACA/R/56	<b>Department of E&amp;TC Engineering</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>DRONE TECHNICAL CLUB INDUCTION PROGRAM FOR FE STUDENTS</b>	Date: 13/09/2024

## INTRODUCTION

On 13th September 2024, the Drone Technical Club of Dhole Patil College of Engineering (DPCOE) successfully conducted an induction program for the first-year students. This event was aimed at introducing the new students to the club, offering insights into its various projects and activities, and highlighting the benefits of joining the club.

## EVENT OVERVIEW

The induction program commenced with a warm welcome from the club's senior members. The event was structured to give new students a comprehensive understanding of the Drone Technical Club, including its mission, ongoing projects, and future goals.

### 1. INTRODUCTION TO THE CLUB

The session began with an overview of the Drone Technical Club, outlining its objectives and the vision behind its formation. The club's history, achievements, and contributions to both academic and extracurricular domains were discussed. The speakers emphasized the club's commitment to fostering innovation, teamwork, and technical skills among its members.

### 2. INSIGHTS INTO PROJECTS AND ACTIVITIES

Participants were given a detailed presentation on the club's current and past projects. This included:

- **Research and Development:** An overview of ongoing research initiatives and development projects related to drone technology.
- **Competitions and Events:** Information on past competitions, events, and exhibitions where the club has showcased its projects.
- **Workshops and Training Sessions:** Details about the workshops, training sessions, and hands-on experiences offered to club members.

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### **3. ADVANTAGES OF JOINING THE CLUB**

The benefits of being a member of the Drone Technical Club were highlighted, including:

- **Skill Development:** Opportunities to acquire and enhance technical skills in drone design, programming, and operation.
- **Networking:** Access to a network of industry professionals, alumni, and experts in the field of drone technology.
- **Practical Experience:** Hands-on experience through participation in real-world projects, competitions, and collaborative activities.
- **Career Opportunities:** Exposure to potential career paths and job opportunities in the rapidly growing drone industry.

### **4. Q&A SESSION**

The induction program concluded with a Q&A session, allowing first-year students to ask questions and seek clarification on various aspects of the club. This interactive session provided valuable insights and addressed any concerns or queries the students had.

### **CONCLUSION**

The Drone Technical Club's induction program successfully introduced first-year students to the world of drone technology and the benefits of joining the club. The event was well-received, with positive feedback from attendees about the informative presentations and engaging discussions. The program achieved its goal of generating interest and encouraging new students to become active members of the Drone Technical Club.

The Drone Technical Club looks forward to welcoming new members and collaborating with them on exciting projects and initiatives in the future.

**DHOLE PATIL COLLEGE OF ENGINEERING**



"INDUCTION PROGRAM"  
ACADEMIC YEAR (2024-25)

Sr. No.	Name of the Candidate	Student Heads Speech	Cyber Security club & Drone Club	UHV	Stress Management	FE 2024 Syllabus & Exam Pattern	NPTEL
		Sign	Sign	Sign	Sign	Sign	Sign
1	Resham Pasidhi	<i>Resham</i>	<i>Resham</i>	<i>Resham</i>	<i>Resham</i>	<i>Resham</i>	<i>Resham</i>
2	Shreya Kokate	<i>Shreya</i>	<i>Shreya</i>	<i>Shreya</i>	<i>Shreya</i>	<i>Shreya</i>	<i>Shreya</i>
3	Vaishnavi Chaudhari	<i>Vaishnavi</i>	<i>Vaishnavi</i>	<i>Vaishnavi</i>	<i>Vaishnavi</i>	<i>Vaishnavi</i>	<i>Vaishnavi</i>
4	Chaitanya Jagtap	<i>Chaitanya</i>	<i>Chaitanya</i>	<i>Chaitanya</i>			
5	Gayatri Tadhar	<i>G.M. Tadhar</i>	<i>G.M. Tadhar</i>	<i>G.M. Tadhar</i>			
6	Ankita Kapse	<i>Ankita</i>	<i>Ankita</i>	<i>Ankita</i>			
7	Sayali Gharipade	<i>Sayali</i>	<i>Sayali</i>	<i>Sayali</i>	<i>Sayali</i>	<i>Sayali</i>	<i>Sayali</i>
8	Puadnya Nikam	<i>Nikam P.N</i>	<i>Nikam P.N</i>	<i>Nikam P.N</i>	<i>Nikam P.N</i>	<i>Nikam P.N</i>	<i>Nikam P.N</i>
9	srachai Gaikwad	<i>Srachai</i>	<i>Srachai</i>	<i>Srachai</i>	<i>Srachai</i>	<i>Srachai</i>	<i>Srachai</i>
10	Sabanamkumari Sahu	<i>Sabanam</i>	<i>Sabanam</i>	<i>Sabanam</i>	<i>Sabanam</i>	<i>Sabanam</i>	<i>Sabanam</i>
11	shilpat. P. Raithod	<i>Shilpat</i>	<i>Shilpat</i>	<i>Shilpat</i>	<i>Shilpat</i>	<i>Shilpat</i>	<i>Shilpat</i>
12	Sahil N. Bhesale	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>
13	Shivam. b. madane	<i>Shivam</i>	<i>Shivam</i>	<i>Shivam</i>	<i>Shivam</i>	<i>Shivam</i>	<i>Shivam</i>
14	Divyesh D. lawande	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>
15	Pranav Kulkar	<i>Pranav</i>	<i>Pranav</i>	<i>Pranav</i>	<i>Pranav</i>	<i>Pranav</i>	<i>Pranav</i>
16	Tanish kumbhakar	<i>Tanish</i>	<i>Tanish</i>	<i>Tanish</i>	<i>Tanish</i>	<i>Tanish</i>	<i>Tanish</i>
17	Sujal. S. Das	<i>Sujal Das</i>	<i>Sujal Das</i>	<i>Sujal Das</i>	<i>Sujal Das</i>	<i>Sujal Das</i>	<i>Sujal Das</i>

18	Ganesh. Vijay. Patil	<i>Ganesh</i>	<i>Ganesh</i>	<i>Ganesh</i>	<i>Ganesh</i>	<i>Ganesh</i>	<i>Ganesh</i>
19	Vineel Kisan Chalukswar	<i>Vineel</i>	<i>Vineel</i>	<i>Vineel</i>	<i>Vineel</i>	<i>Vineel</i>	<i>Vineel</i>
20	Aditya Ganesh Khamkar	<i>Aditya</i>	<i>Aditya</i>	<i>Aditya</i>	<i>Aditya</i>	<i>Aditya</i>	<i>Aditya</i>
21	srinivas. D. Sonad-e	<i>Srinivas</i>	<i>Srinivas</i>	<i>Srinivas</i>	<i>Srinivas</i>	<i>Srinivas</i>	<i>Srinivas</i>
22	Anus Potharkar	<i>Anus</i>	<i>Anus</i>	<i>Anus</i>	<i>Anus</i>	<i>Anus</i>	<i>Anus</i>
23	Akash Dande Kar	<i>Akash</i>	<i>Akash</i>	<i>Akash</i>	<i>Akash</i>	<i>Akash</i>	<i>Akash</i>
24	Pratik Parbat	<i>Pratik</i>	<i>Pratik</i>	<i>Pratik</i>	<i>Pratik</i>	<i>Pratik</i>	<i>Pratik</i>
25	Jagtap Aryan Babasaheb	<i>Jagtap</i>	<i>Jagtap</i>	<i>Jagtap</i>	<i>Jagtap</i>	<i>Jagtap</i>	<i>Jagtap</i>
26	Prasad Subhash Gadade	<i>Prasad</i>	<i>Prasad</i>	<i>Prasad</i>	<i>Prasad</i>	<i>Prasad</i>	<i>Prasad</i>
27	Avdhut Santosh Gadade	<i>Avdhut</i>	<i>Avdhut</i>	<i>Avdhut</i>	<i>Avdhut</i>	<i>Avdhut</i>	<i>Avdhut</i>
28	Sahil Subhash Kanble	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>	<i>Sahil</i>
29	Kunal Limbaji Inpramussa Kung	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>
30	Praneshwar Ganesh Patil	<i>Praneshwar</i>	<i>Praneshwar</i>	<i>Praneshwar</i>	<i>Praneshwar</i>	<i>Praneshwar</i>	<i>Praneshwar</i>
31	Pradip Pratap Santosh	<i>Pradip</i>	<i>Pradip</i>	<i>Pradip</i>	<i>Pradip</i>	<i>Pradip</i>	<i>Pradip</i>
32	Aryan S. Salunke	<i>Aryan</i>	<i>Aryan</i>	<i>Aryan</i>	<i>Aryan</i>	<i>Aryan</i>	<i>Aryan</i>
33	Divyesh. Y. Gadge	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>	<i>Divyesh</i>
34	Aksh Quintal	<i>Aksh</i>	<i>Aksh</i>	<i>Aksh</i>	<i>Aksh</i>	<i>Aksh</i>	<i>Aksh</i>
35	Shivaram Rajat	<i>Shivaram</i>	<i>Shivaram</i>	<i>Shivaram</i>	<i>Shivaram</i>	<i>Shivaram</i>	<i>Shivaram</i>
36	Chinmay Parthaj Patil	<i>Chinmay</i>	<i>Chinmay</i>	<i>Chinmay</i>	<i>Chinmay</i>	<i>Chinmay</i>	<i>Chinmay</i>
37	Krushna Arvind Giri	<i>Krushna</i>	<i>Krushna</i>	<i>Krushna</i>	<i>Krushna</i>	<i>Krushna</i>	<i>Krushna</i>
38	Vedang Santosh Khole	<i>Vedang</i>	<i>Vedang</i>	<i>Vedang</i>	<i>Vedang</i>	<i>Vedang</i>	<i>Vedang</i>
39	Kunal N. N. Sankar	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>	<i>Kunal</i>
40	Yashraj Waghmare	<i>Yashraj</i>	<i>Yashraj</i>	<i>Yashraj</i>	<i>Yashraj</i>	<i>Yashraj</i>	<i>Yashraj</i>

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61	Ajinkya S. Ingulkar	Ajinkya Ingulkar	Ajinkya Ingulkar	Ajinkya Ingulkar	Ajinkya Ingulkar	Ajinkya Ingulkar	Ajinkya Ingulkar
62	Mahesh H. Manwar	Mahesh Manwar	Mahesh Manwar	Mahesh Manwar	Mahesh Manwar	Mahesh Manwar	Mahesh Manwar
63	Shravani Ghalge	Shravani Ghalge	Shravani Ghalge	Shravani Ghalge	Shravani Ghalge	Shravani Ghalge	Shravani Ghalge
64	Tanmayee S. Yadav	Tanmayee Yadav	Tanmayee Yadav	Tanmayee Yadav	Tanmayee Yadav	Tanmayee Yadav	Tanmayee Yadav
65	Deven dora A. Chimanakar	Deven Dora	Deven Dora	Deven Dora	Deven Dora	Deven Dora	Deven Dora
66	cm.N. Ghodke	cm.N. Ghodke	cm.N. Ghodke	cm.N. Ghodke	cm.N. Ghodke	cm.N. Ghodke	cm.N. Ghodke
67	Akshay Abhaykumar Dongre	Akshay Dongre	Akshay Dongre	Akshay Dongre	Akshay Dongre	Akshay Dongre	Akshay Dongre
68	Abhishek Ekam	Abhishek Ekam	Abhishek Ekam	Abhishek Ekam	Abhishek Ekam	Abhishek Ekam	Abhishek Ekam
69	pratiksha Kadam	Pratiksha Kadam	Pratiksha Kadam	Pratiksha Kadam	Pratiksha Kadam	Pratiksha Kadam	Pratiksha Kadam
70	Satyam Patil	Satyam Patil	Satyam Patil	Satyam Patil	Satyam Patil	Satyam Patil	Satyam Patil
71	Ayush Pawate	Ayush Pawate	Ayush Pawate	Ayush Pawate	Ayush Pawate	Ayush Pawate	Ayush Pawate
72	Joham Pandurangam	Joham Pandurangam	Joham Pandurangam	Joham Pandurangam	Joham Pandurangam	Joham Pandurangam	Joham Pandurangam
73	Jay Dhale	Jay Dhale	Jay Dhale	Jay Dhale	Jay Dhale	Jay Dhale	Jay Dhale
74	Pradhamesh Bharad patil	Pradhamesh Bharad patil	Pradhamesh Bharad patil	Pradhamesh Bharad patil	Pradhamesh Bharad patil	Pradhamesh Bharad patil	Pradhamesh Bharad patil
75	maheesh Ramesh Patil	Maheesh Ramesh Patil	Maheesh Ramesh Patil	Maheesh Ramesh Patil	Maheesh Ramesh Patil	Maheesh Ramesh Patil	Maheesh Ramesh Patil
76	Palwade Dattatray.T	Palwade Dattatray.T	Palwade Dattatray.T	Palwade Dattatray.T	Palwade Dattatray.T	Palwade Dattatray.T	Palwade Dattatray.T
77	Tanisi Mohd Khasad	Tanisi Mohd Khasad	Tanisi Mohd Khasad	Tanisi Mohd Khasad	Tanisi Mohd Khasad	Tanisi Mohd Khasad	Tanisi Mohd Khasad
78	Omkar Raju Korade	Omkar Raju Korade	Omkar Raju Korade	Omkar Raju Korade	Omkar Raju Korade	Omkar Raju Korade	Omkar Raju Korade
79	kiran Raju Korade	Kiran Raju Korade	Kiran Raju Korade	Kiran Raju Korade	Kiran Raju Korade	Kiran Raju Korade	Kiran Raju Korade
80	Harshal Suresh Kothari	Harshal Suresh Kothari	Harshal Suresh Kothari	Harshal Suresh Kothari	Harshal Suresh Kothari	Harshal Suresh Kothari	Harshal Suresh Kothari

Prof.Sandip Kale  
FE Incharge

Sr. No.	Name of the Candidate	Student Heads Speech	Cyber Security club & Drone Club	UHV	Stress Management	FE 2024 Syllabus & Exam Pattern	NPTL
		Sign	Sign	Sign	Sign	Sign	Sign
81	Shreyash Rakesh Pandey	Shreyash Pandey	Shreyash Pandey	Shreyash Pandey	Shreyash Pandey	Shreyash Pandey	Shreyash Pandey
82	Ritesh S. Sawate	Ritesh Sawate	Ritesh Sawate	Ritesh Sawate	Ritesh Sawate	Ritesh Sawate	Ritesh Sawate
83	Atharva Chaudhami	Atharva Chaudhami	Atharva Chaudhami	Atharva Chaudhami	Atharva Chaudhami	Atharva Chaudhami	Atharva Chaudhami
84	Mohit Khairanar	Mohit Khairanar	Mohit Khairanar	Mohit Khairanar	Mohit Khairanar	Mohit Khairanar	Mohit Khairanar
85	Kshitij Y. Dadich	Kshitij Dadich	Kshitij Dadich	Kshitij Dadich	Kshitij Dadich	Kshitij Dadich	Kshitij Dadich
86	Aman atbav	Aman atbav	Aman atbav	Aman atbav	Aman atbav	Aman atbav	Aman atbav
87	am Dhage	am Dhage	am Dhage	am Dhage	am Dhage	am Dhage	am Dhage
88	Aditya Sapkal	Aditya Sapkal	Aditya Sapkal	Aditya Sapkal	Aditya Sapkal	Aditya Sapkal	Aditya Sapkal
89	Bhagadesh Y. Bhakare	Bhagadesh Bhakare	Bhagadesh Bhakare	Bhagadesh Bhakare	Bhagadesh Bhakare	Bhagadesh Bhakare	Bhagadesh Bhakare
90	Yash Mane	Yash Mane	Yash Mane	Yash Mane	Yash Mane	Yash Mane	Yash Mane
91	Siddhika Wankhede	Siddhika Wankhede	Siddhika Wankhede	Siddhika Wankhede	Siddhika Wankhede	Siddhika Wankhede	Siddhika Wankhede
92	Sansruddhi Naphal	Sansruddhi Naphal	Sansruddhi Naphal	Sansruddhi Naphal	Sansruddhi Naphal	Sansruddhi Naphal	Sansruddhi Naphal
93	Ishika Ingle	Ishika Ingle	Ishika Ingle	Ishika Ingle	Ishika Ingle	Ishika Ingle	Ishika Ingle
94	Srushti Sakore	Srushti Sakore	Srushti Sakore	Srushti Sakore	Srushti Sakore	Srushti Sakore	Srushti Sakore
95	Shabduli Pawdhan	Shabduli Pawdhan	Shabduli Pawdhan	Shabduli Pawdhan	Shabduli Pawdhan	Shabduli Pawdhan	Shabduli Pawdhan
96	Sukheta Dihal	Sukheta Dihal	Sukheta Dihal	Sukheta Dihal	Sukheta Dihal	Sukheta Dihal	Sukheta Dihal
97	Sharvati Ghodke	Sharvati Ghodke	Sharvati Ghodke	Sharvati Ghodke	Sharvati Ghodke	Sharvati Ghodke	Sharvati Ghodke
98	ALVEERA ILYAS shaikh	Alveera Shaikh	Alveera Shaikh	Alveera Shaikh	Alveera Shaikh	Alveera Shaikh	Alveera Shaikh
99	Soniya Mulla	Soniya Mulla	Soniya Mulla	Soniya Mulla	Soniya Mulla	Soniya Mulla	Soniya Mulla
100	Saniya Adhav	Saniya Adhav	Saniya Adhav	Saniya Adhav	Saniya Adhav	Saniya Adhav	Saniya Adhav
101	Aishwarya A. Gulakasi	Aishwarya Gulakasi	Aishwarya Gulakasi	Aishwarya Gulakasi	Aishwarya Gulakasi	Aishwarya Gulakasi	Aishwarya Gulakasi

102	Shraddha Ajit Patil	Patil	Patil	Patil	Patil	Patil	Patil
103	Pranali Anil Gaikwad	Patil	Patil	Patil	Patil		
104	Pranali Laxman Vharkar	Patil	Patil	Patil	Patil		
105	Anuja Ashruba Surwase	Amey	Amey	Amey	Amey	Amey	Amey
106	Sheavani sandip Khetmal	Khetmal	Khetmal	Khetmal	Khetmal		
107	Asmita Ramakant Suryawanshi	Amey	Amey	Amey	Amey	Amey	Amey
108	Parvati Ganpat Kunjjo	Amey	Amey	Amey	Amey	Amey	Amey
109	Shreya bhausaheb Sawant	S.B.Sawant	S.B.Sawant	S.B.Sawant	S.B.Sawant	S.B.Sawant	S.B.Sawant
110	Arkale Divyarani K.	Amey	Amey	Amey	Amey	Amey	Amey
111	Bhoomi D.	Amey	Amey	Amey	Amey	Amey	Amey
112	Sushmita S. Nambare	Amey	Amey	Amey	Amey	Amey	Amey
113	Esheen Bhasale	Amey	Amey	Amey	Amey	Amey	Amey
114	Nisha Waghmare	Amey	Amey	Amey	Amey	Amey	Amey
115	Ruturaj S. Kawale	Amey	Amey	Amey	Amey	Amey	Amey
116	Krushal Verma	Amey	Amey	Amey	Amey	Amey	Amey
117	Shree Gaikwad	Amey	Amey	Amey	Amey	Amey	Amey
118	Swadeep Singh	Amey	Amey	Amey	Amey	Amey	Amey
119	Ned. Jadhav	Amey	Amey	Amey	Amey	Amey	Amey
120	Aditya Mahesh Lokhande	Amey	Amey	Amey	Amey	Amey	Amey

Prof.Sandip Kale  
FE Incharge

Sr. No.	Name of the Candidate	Student Heads Speech	Cyber Security club & Drone Club	UHV	Stress Management	FE 2024 Syllabus & Exam Pattern	NPTL
		Sign	Sign	Sign	Sign	Sign	Sign
121	Shlok Anil Khat. Jadhav	Shlok	Shlok	Shlok	Shlok	Shlok	Shlok
122	Rajendra Bahadur Vishnai	Rajendra	Rajendra	Rajendra	Rajendra	Rajendra	Rajendra
123	Shriyavardhini Paradeshi	Shriyavardhini	Shriyavardhini	Shriyavardhini	Shriyavardhini	Shriyavardhini	Shriyavardhini
124	Ned. Jadhav	Ned	Ned	Ned	Ned	Ned	Ned
125	Pranali Anil Gaikwad	Patil	Patil	Patil	Patil	Patil	Patil
126	Pranali Laxman Vharkar	Patil	Patil	Patil	Patil	Patil	Patil
127	Vaishnavi Chaudhari	Vaishnavi	Vaishnavi	Vaishnavi	Vaishnavi	Vaishnavi	Vaishnavi
128	Shreya Kokate	Shreya	Shreya	Shreya	Shreya	Shreya	Shreya
129	Vedant Santosh Khole	Vedant	Vedant	Vedant	Vedant	Vedant	Vedant
130	Sahil N. Bhasale	Sahil	Sahil	Sahil	Sahil	Sahil	Sahil
131	Samruddhi Daphal	Daphal	Daphal	Daphal	Daphal	Daphal	Daphal
132	Hrishikesh Bhat	Hrishikesh	Hrishikesh	Hrishikesh	Hrishikesh	Hrishikesh	Hrishikesh
133	Abhiraj Ashok Thorat	Abhiraj	Abhiraj	Abhiraj	Abhiraj	Abhiraj	Abhiraj
134	Abhishek Tam	Abhishek	Abhishek	Abhishek	Abhishek	Abhishek	Abhishek
135	Madhukar Pratik Santosh	Madhukar	Madhukar	Madhukar	Madhukar	Madhukar	Madhukar
136	Prasad Subhash Gadade	Prasad	Prasad	Prasad	Prasad	Prasad	Prasad
137	Shraddha Anil Gaikwad	Patil	Patil	Patil	Patil	Patil	Patil
138							
139							
140							
141							



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ACA/R / 04	<b>Department of E&amp;TC Engineering</b>	Academic Year: 2024-2025
Rev : 00		Semester: ODD SEM
Date: 15.12.2016	<b>Notice</b>	<b>Ref: Dept/ACA</b>

**Date: 18/09/2024**

**DRONE TECHNICAL CLUB**

This is to inform all members of the Drone Club that the **Drone Club Curriculum** will commence from **19th September 2024**, and the sessions will be held from **4:00 PM to 5:00 PM**.

Attendance is **compulsory** for all members, and it is expected that everyone attends the sessions regularly. The curriculum has been designed to enhance your understanding and skills in drone technology and development.

Your active participation is crucial for your growth and the success of the club. For any queries, feel free to reach out to the Drone Club council.

**Prof. Neha Dumne**  
Club Advisor

**Prof. Prachi Deshpande**  
HOD, E&TC Dept.

ACA/R / 56	<b>Department of E&amp;TC Engineering</b>	Academic Year: 2024-2025
Rev : 00		Semester: ODD SEM
Date: 15.12.2016	<b>FIXED WING RC PLANE PROPOSAL</b>	

**Date of Meeting:** September 18, 2024

**Organized by:** Drone Club Members

On September 18, 2024, the Drone Club held a meeting to discuss an exciting new project proposal: the development of a fixed-wing RC (remote-controlled) plane. A group of members led the session, presenting their plans and ideas to the club, highlighting the technical aspects, project goals, and potential applications of the RC plane.

#### **Meeting Highlights:**

1. **Presentation on Fixed-Wing RC Plane Project:** Members delivered an in-depth presentation covering the project's objectives, the basic design of a fixed-wing aircraft, and the components required for the build. This included discussions on aerodynamics, control mechanisms, and materials.
2. **Project Proposal:** The proposing team outlined a detailed timeline and budget estimate for the RC plane project. They also discussed potential challenges, such as balancing weight for optimal flight and sourcing high-quality components.
3. **Feedback and Suggestions:** The club members engaged in a productive discussion, offering feedback and ideas to enhance the project. Suggestions included focusing on durability, exploring lightweight materials, and testing flight control systems.
4. **Project Approval Process:** The session ended with the team requesting club approval and support for the project, with plans to kick off initial stages soon. Members showed strong interest and enthusiasm, agreeing to collaborate and contribute resources.

This meeting marks an important step forward for the Drone Club as it continues to explore advanced UAV projects. The fixed-wing RC plane project promises to expand members' skills in drone design, flight mechanics, and project management, contributing to the club's mission of hands-on learning and technical innovation.



ACA/R / 56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year: 2024-2025
Rev : 00		Semester: ODD SEM
Date: 15.12.2016	<b>CURRICULUM LECTURE DAY 1</b>	

**Date of Launch:** September 19, 2024

**Location:** Drone club workspace

The **Drone Club** officially launched its curriculum lectures on September 19, 2024, marking a significant milestone in our commitment to drone technology education. This inaugural session began with high energy, as newly joined members gathered to embark on their journey into the fascinating world of drones and UAVs (Unmanned Aerial Vehicles).

**Session Highlights:**

1. **Introduction to the Drone Club:** New members were welcomed and introduced to the mission, vision, and objectives of the Drone Club, gaining an understanding of the club's role within the institution and in the broader drone industry.
2. **Overview of Drone Technology:** Members received an introductory lesson on the basics of drone technology. This included foundational knowledge on drone components, functions, and the various applications of UAVs across industries.
3. **Hands-On Exploration of UAVs:** Members had the opportunity to engage directly with UAV equipment. This interactive experience allowed them to gain initial insights into the operation, structure, and maintenance of drones.





### **Looking Ahead**

This first session represents only the beginning of an enriching curriculum designed to equip members with both theoretical knowledge and practical skills. Future sessions will delve deeper into drone-building techniques, flight training, event participation, and workshops led by industry experts and club partners.

As we move forward, the Drone Club is excited to foster a hands-on learning environment that will challenge our members to develop their technical expertise and stay abreast of innovations in drone technology. We look forward to sharing more updates and achievements as we soar to new heights in the field of UAVs!

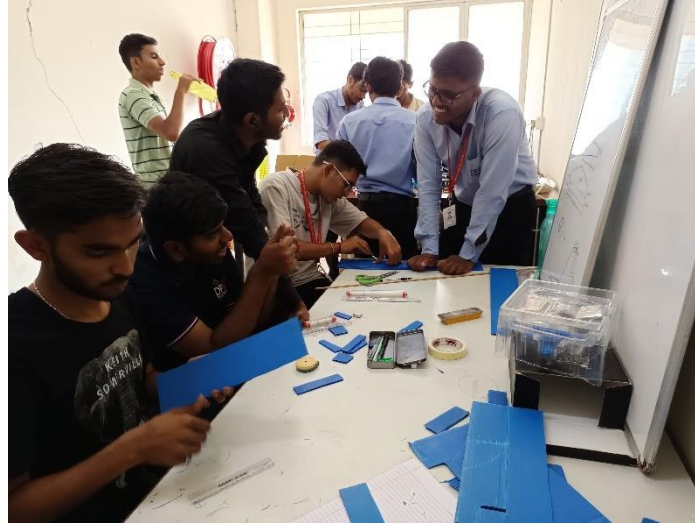
ACA/R / 56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year: 2024-2025
Rev : 00		Semester: ODD SEM
Date: 15.12.2016	<b>RC PLANE PROJECT START</b>	

**Date of Project Commencement:** September 21, 2024

The **Drone Club** officially began its much-anticipated Fixed-Wing RC Plane project on September 21, 2024. Following a successful proposal presentation on September 18, the project team, along with other club members, gathered to kick-start the initial phases of the build. This project aims to provide hands-on experience in designing, building, and testing a remote-controlled fixed-wing aircraft, advancing members' knowledge in aerodynamics, electronics, and UAV technology.







**Project Objectives:**

1. **Design and Assembly:** To design a robust and efficient fixed-wing RC plane that can be controlled remotely, with stability and maneuverability as key priorities.
2. **Learning Focus:** Equip members with practical skills in UAV assembly, flight dynamics, and problem-solving in real-world drone construction.
3. **Testing and Evaluation:** Perform multiple flight tests to evaluate the aircraft's performance, followed by adjustments and refinements based on observed data.

**Project Phases and Initial Steps:**

1. **Phase 1 - Design and Planning:** The team began by finalizing the design plans, choosing materials, and allocating tasks among members. Emphasis was placed on selecting lightweight materials and aerodynamically sound structures to ensure a stable flight experience.
2. **Phase 2 - Component Sourcing and Assembly:** The club has started sourcing essential components, such as the fuselage, wings, motor, propeller, and control system. Initial assembly work has commenced, with members working collaboratively on the construction.
3. **Phase 3 - Testing and Iteration (Upcoming):** Once assembly is complete, the team will conduct test flights to assess the plane's performance. Data from these tests will guide further adjustments to improve stability, control, and endurance.

**Team Roles and Collaboration:**

- The project team is divided into smaller groups focusing on specific areas, such as design, electronics, assembly, and testing. This division ensures that each aspect of the project receives dedicated attention, enhancing both efficiency and learning outcomes.

**Expected Outcomes:** This project is expected to deepen members' understanding of fixed-wing aircraft, strengthen teamwork, and build proficiency in UAV technology. The Drone Club anticipates that the RC plane will serve as a foundational project for more complex UAV designs in the future. The Fixed-Wing RC Plane project reflects the club's commitment to hands-on learning and technical advancement. As we move forward, we look forward to providing updates on the project's progress and celebrating successful test flights in the near future.

ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>TECHNOXIAN WORLD CHAMPIONSHIPS</b>	Date: 24 to 27/08/2024

## Department of Electronics & Telecommunication Engineering

### Drone Technical Club



### TECHNOXIAN WORLD ROBOTIC'S CHAMPIONSHIP

**Mr. Sagar U. Dhole Patil**  
**CHAIRMAN, DPES**

### ACKNOWLEDGEMENT



We would like to extend our deepest and most sincere gratitude to **Hon. Chairman Shri Sagar U. Dhole Patil Sir** for his invaluable support, guidance, and encouragement, which played a crucial role in enabling our Drone Club's participation in the prestigious Technoxian World Robotics Championship. His unwavering commitment to promoting innovation and technological excellence has been a driving force behind our success.

**Hon. Chairman Sir's** belief in our potential and vision has empowered us to not only represent our institution but also to showcase our skills on a global platform. His generous contributions, both in terms of resources and mentorship, have provided us with the confidence and tools necessary to overcome challenges and reach new heights.

We are truly fortunate to have a leader who fosters a culture of growth and innovation within our college. His continuous encouragement motivates us to pursue excellence in all our endeavours.

Thank you, **Hon. Chairman Shri Sagar U. Dhole Patil Sir**, for your relentless support, trust, and inspiration. Your contributions have been instrumental in shaping our journey, and we look forward to making you proud in all our future achievements.



**Dr. Abhijit Dandavate, Director DPES**

We would like to express our sincere gratitude to **Dr. Abhijit Dandavate Sir, Director of DPES**, for his constant support and guidance in all the activities of our Drone Club. His unwavering encouragement has been a pillar of strength for us, enabling our growth and success in every endeavor.

This time as well, **Dr. Abhijit Dandavate Sir** belief in our capabilities and his continuous backing were instrumental in helping us participate in the Technoxian World Robotics Championship. His insightful mentorship and dedication to nurturing innovation within our club have greatly contributed to our achievements.

Thank you, **Director Sir**, for always being there to support and inspire us. Your leadership and belief in our potential have fueled our passion for excellence. We are deeply grateful for your trust and commitment to our success.



**Dr. Omprakash Rajankar, Principal DPCOE**

We would like to extend our heartfelt appreciation to **Dr. Omprakash Rajankar Sir, Principal of DPCOE**, for his unwavering support and encouragement throughout our journey. His leadership and guidance have been pivotal in fostering an environment of growth and innovation within our Drone Club.

**Dr. Omprakash Rajankar's Sir** constant belief in our abilities, along with his commitment to providing us with the necessary resources, played a significant role in our participation in the Technoxian World Robotics Championship. His support has enabled us to push boundaries, embrace challenges, and achieve success.

Thank you, **Principal Sir**, for your continued encouragement and for being a driving force behind our endeavors. Your dedication to our club's progress has been truly inspiring, and we are grateful for your invaluable contributions to our journey.



**Prof. Prachi Deshpande**

**HOD, E&TC DEPT.**



**Prof. Vikram Avhad**

**TECHNICAL CLUB HEAD**



**Prof. Neha Dumne**

**DRONE CLUB ADVISOR**

We would like to express our deepest gratitude to **Prof. Prachi Deshpande**, Head of the E&TC Department, for her continued guidance and leadership. Her support has been instrumental in ensuring the success of our Drone Club's activities and initiatives. Her encouragement and insights have always motivated us to strive for excellence.

A heartfelt thank you to **Prof. Vikram Avhad**, our Technical Club Head, whose technical expertise and mentorship have been invaluable. His dedication to fostering innovation and providing hands-on support has helped elevate our technical capabilities, especially during challenging times such as our participation in the Technoxian World Robotics Championship.

We would also like to extend our sincere appreciation to **Prof. Neha Dumne**, Drone Club Advisor, for her constant support, advice, and encouragement. Her commitment to the club has been a driving force behind many of our successful endeavors, and her belief in our potential has given us the confidence to tackle new challenges.

Thank you to each of you for your unwavering dedication and mentorship. Your contributions have been key to the growth and success of the Drone Club.



**DHOLE PATIL EDUCATION SOCIETY'S**

**DHOLE PATIL COLLEGE OF ENGINEERING**

Accredited by NAAC with A+ Grade, An ISO 9001:2015 Certified Institute

1284, Near Eon IT Park Kharadi, Dhole Patil College Road, Wagholi, Pune-412207

Website: <https://dpcoepune.edu.in/> E-mail: dpcoepune@gmail.com, Phone:020-66059900

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### **TEAM SCREWDRIVERS**

We would like to express our deepest gratitude to **Team Screwdrivers** for their exceptional guidance, support, and encouragement throughout our journey. Your team's willingness to share knowledge, offer advice, and provide technical insights was instrumental in helping us navigate through the challenges we faced.

When difficulties seemed overwhelming, your expertise and dedication were there to guide us, ensuring that we stayed on course and continued to make progress. The collaboration with your team has been truly enriching, and your contributions have had a profound impact on our success.

We are incredibly fortunate to have had the opportunity to learn from such a skilled and supportive team. Your commitment to excellence and innovation has not only helped us overcome obstacles but also inspired us to push our boundaries further.

We look forward to maintaining this relationship and working together on future endeavours. Thank you once again for your unwavering support!

## INTRODUCTION

The **TechnoXian World Robotics Championship (WRC)** is one of the largest robotics events globally, organized by the **All India Council for Robotics & Automation (AICRA)**. It serves as a prestigious platform for students, innovators, and tech enthusiasts to showcase their skills and compete in various robotics and technology-based challenges. Participants come from across the world, making it a highly competitive and educational event.

### Event Overview

- **Event Name:** TechnoXian World Robotics Championship 2024
- **Organizer:** All India Council for Robotics & Automation (AICRA)
- **Date:** August 24-27, 2024
- **Location:** Noida Indoor Stadium, Delhi/NCR, India
- **Categories:** Includes drone racing, robot soccer, RC car racing, line follower robots, drone rescue, RC planes, etc.

The WRC offers participants a unique opportunity to interact with global peers and industry leaders, explore cutting-edge technology, and participate in a series of exciting competitions that test their technical abilities, teamwork, and creativity.

### Event Highlights

#### - **Exciting Competitions**

TechnoXian 2024 featured a wide range of competitions, providing a platform for participants to demonstrate their technical skills and creativity. The main event categories included:

- **WRC Innovation Contest:** Encouraged participants to showcase their innovative robotics projects and inventions.
- **WRC RoboSoccer:** Robots competed in a fast-paced soccer match, emphasizing real-time AI and strategic gameplay.
- **WRC Bots Combat:** A crowd-favourite event where robots battled in an arena, testing their durability, power, and strategy.
- **WRC ROBO RACE:** Robots raced against the clock, navigating complex courses with precision and speed.
- **WRC Fastest Line Follower:** Teams programmed robots to follow a line on a predefined track, aiming for the fastest time.



- **WRC Water Rocket:** Participants launched water-propelled rockets to achieve the longest flight distance, testing aerodynamics and precision.
- **WRC Maze Solver:** Robots were tasked with solving intricate mazes, showcasing AI and sensor navigation skills.
- **WRC RC Craft:** Remote-controlled vehicles competed in challenges testing manoeuvrability and control.
- **WRC Drone Rescue:** Participants programmed drones to complete simulated rescue missions, displaying aerial manoeuvring and automation.
  - **WRC Sumo Bots:** Robots battled to push each other out of a ring, testing strength, design, and control.
  - **WRC Drone Soccer:** An aerial drone soccer game, where precision, agility, and teamwork were key to victory.
  - **WRC Drone Racing (FPV):** First-person-view drone racing, where participants piloted drones through obstacle courses at high speeds.
  - **WRC RC Electric Car Racing:** A competitive race for remote-controlled electric cars, focusing on speed and control.
  - **WRC Robo Hockey:** Teams of robots competed in a high-energy game of hockey, working together to score goals.

### **Objectives of the Event**

- Foster innovation in robotics and automation.
- Provide participants with hands-on experience in designing and building technology solutions.
- Encourage collaboration and exchange of ideas across the global tech community.
- Offer exposure to industry leaders and potential sponsorship or partnership opportunities.

## TECHNOXIAN REGISTRATION PROCESS

### Event Registration

#### 2.1 Registration Overview

Our team, **Team Hawks**, registered for the **Drone Rescue Challenge** at **TechnoXian 2024**. The registration was completed using the provided online portal, where team details, individual member information, and RoboClub data were submitted. Each team member received unique registration IDs after completing the process.

#### 2.2 Team Registration Details

- **Team Name:** Team Hawks
- **RoboClub ID:** TXCLB433110583
- **Event Category:** Drone Rescue Challenge
- **Institute Name:** Dhole Patil College of Engineering
- **State:** Maharashtra
- **City:** Pune
- **Country:** India
- **Team Adviser:** Prof. Neha Dumne
- **Team Leader:** Suraj Pawar (Team Captain & Documentation incharge)
- **Team Members:** 1). Ashish Paul (Team Vice Captain & FC Incharge)
  - 2). Harsh Pandey (Drone components incharge)
  - 3). Ajay Savare (Drone components incharge)
  - 4). Gaurav Katare (Communication & Gripper mechanism incharge)
  - 5). Shoheb Shaikh (Co documentation incharge)
  - 6). Kedar Jagadale (Pilot)
  - 7). Diksha Gholap (Social Media Incharge)
  - 8). Simran Pathan (Social Media Incharge)
  - 9). AbuSufiyan Shaikh (Support)



**DHOLE PATIL EDUCATION SOCIETY'S**

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Website: <https://dpcoepune.edu.in/> E-mail: dpcoepune@gmail.com, Phone:020-66059900

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- **Registration Date:** 09 May 2024

- **Team Registration ID:** WRC280224435

- **Individual Member IDs:**

- TXMP246703266 (Ajay Savare)
- TXMP247023266 (Harsh Pandey)
- TXMP243583266 (Suraj Pawar)
- TXMP246323266 (Shoheb Shaikh)
- TXMP244573270 (Simran Pathan)
- TXMP247833270 (Ashish Paul)
- TXMP248523272 (Diksha Gholap)
- TXMP248113272 (Kedar Jagadale)
- TXMP243993272 (Gaurav Katare)
- TXMP241633276 (AbuSufiyan Shaikh)



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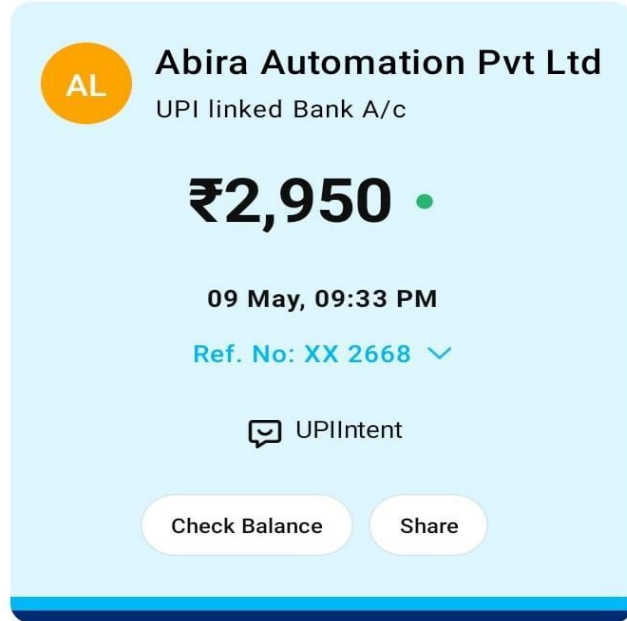
- **Registration Amount:** Rs. 2950/-

- **Status:** Paid



paytm

Help



## 2.3 Registration Process

The registration involved filling out a detailed form, as seen in the screenshot attached. Fields such as the applicant's name, team leader's details, and specific drone information were required. Once completed, each team member received their own registration ID, along with a collective team registration ID and captain ID.

Register for WRC August 24-27, 2024. Delhi/NCR (India)

[Home](#) > Register for WRC Competiti

WRC Competition: *		Applicant Name: *	
Drone Competition		Enter Name	
Profile:		Mobile Number: *	
Please Select		Enter Mobile	
Email Id: *	DOB: *	College/Institute Name: *	
Enter Email Id	dd-mm-yyyy	Dhole Patil College of engineering	
RoboClub Name:	RoboClub Id:	Category: *	
Team Hawks	TXCLB433110583	Select Category	
City:	State:	Country: *	
Pune	Maharashtra	India	
<b>Team Details:</b>			
Profile: *	Captain: *	Name: *	Mobile: *
Captain	Select Captain	Captain Name	Mobile No.
			Email: *
			Email id
Member: *	Select Participants: *		
Member	<input type="checkbox"/> TXMP246703266 (Ajay Savare ) <input type="checkbox"/> TXMP247023266 (Harsh Pandey ) <input type="checkbox"/> TXMP243583266 (Suraj Pawar ) <input type="checkbox"/> TXMP246323266 (Shoheb Shaikh )		

## Technoxian Registration form

## **GUIDELINES FOR DRONE RESCUE CHALLENGE**

The challenge is to build a drone within the specified dimensions that are aerodynamically stable to achieve a successful flight. The competition has 4 rounds, in which the performance of the drone will be evaluated individually. The team Scoring the maximum points in the final round will be nominated as the winner of the competition.

- 100 Teams to participate in Drone Challenge.
- All participants will get the certification of Participation from “All India Council for Robotics & Automation (AICRA)”.
- INR 1,25,000 to be awarded to winning teams.

### **Eligibility Criteria:**

- Open for all : Colleges/Universities every age group can participate.

### **How To Get on Drone Challenge:**

A match is played by a single team in one go, with each team consisting of 1 Drone.

- An individual may participate or construct a team of a minimum of 2 and a maximum of 10 members. Any institution (School/College/University/Vocational Institution) or group of students (within defined age), may form a team.
- Register team for the specified competition online on the official TechnoXian website only.
- Construct a drone between 40cm\*40cm (L\*B) and 75cm\*75cm (LxB) (Measured diagonally – motor shaft to shaft / Wheel Base of the Drone frame) size and a maximum weight of less than 2Kg. the Drone fits the mentioned specifications as long as the design and construction are primarily the original work of the team. A ready-made drone kit is not acceptable, if found so, the team will be disqualified.

### **THE DRONE:**

The team has to design and construct a drone (Tri, Quad, or Hexa) with the following specifications:

- The complete Drone (including Battery and landing gear) should be of length minimum 40cm\*40cm (L\*B) and maximum 75cm\*75cm (LxB) (Measured diagonally – motor shaft to shaft / Wheel Base of the Drone frame) and must weigh less than 2Kg.

- There is no restriction on the use of any frame material or specification of the BLDC Motors, Electronic Speed Controllers, Propellers, Batteries, and Weight of the Drone.
- The Drone must be electrically powered only.

### **DRONE RACING TRACK:**

The field area would be approx. 100 M<sup>2</sup>

- There are marked/specified regions/spots to take off and land the drone.
- Hurdles will be placed at a different location in the arena.
- Fields will have arrows marked to depict the manoeuvring path.
- Specific checkpoints will be defined in the arena for changing the batteries, adjusting gains, calibration of sensors, etc.
- Time will be given to the teams for charging their batteries at the completion of every stage. The requirement of time of charging the batteries during the conduct of competition will not be entertained.

### **DRONE GAME PLAY:**

#### **Pre-Game setup:**

- The Drone will be evaluated on various parameters such as design, construction, and innovation.
- Every aspect of the Drone will be observed for scoring which includes the connection of various parts, fixing of components, materials used, aero modelling, etc.

**Game Clock:** The game clock starts as soon as the referee commands the beginning of the round and stops as soon as the maximum access time (5 Minutes) of that round elapse.

**Run Time:** Run time starts as soon as the game clock starts/the drone takes/off and stops when the drone lands successfully.

**Flight time:** The flight time will be the official time taken by each drone. Flight time= (Total Access time for the round)-(Run time)

#### **Round 1 (5 min) FIELD SURVEY:**

- Minimum 3 to maximum 4 teams would be playing at a time.

- In this round, Team has to do a survey of fire ground to gather information about casualties, observing terrains and obstacles. (2 min)
- Reporting the data and status of fireground to team and making the strategy for operation. (1min)
- Meeting with other team captains for cooperation to make the rescue mission successful. (2 min).
- The challenge is to take off from a specific location and land within the boundary of a predetermined circular landing spot in the minimum time possible and before the access time elapse.
- The top 15 teams to complete the circuit with the best timings will move to the final round.

#### **Round 2 (5min) RESCUE ROUND**

- Different colour of “Rescue Boxes” will be kept in center area, one each allocated to 1 team.
- Drone to pick casual bodies (weight appx 100gm) from fireground and drop them in Rescue Box.
- Points will be awarded for each life saved (Collection of bodies in Rescue Box) with the defined timeline.
- The team completing the round in the minimum time to complete the round and scoring the maximum point will be nominated as the winner of the competition.

#### **COMPETITON INFORMATION:**

**Venue: Noida Indoor Stadium**

**Registration Fee:**

- For Indian resident: INR 2950/- (Inclusive GST) per challenge.
- For non-India resident: USD 50 per team.

**Prize Bifurcation:** INR 60,000 (1st Prize) / INR 40,000 (2nd Prize) / INR 25,000 (3rd Prize)

**Registration mode:** Online.



## SPONSORSHIP

### Team Sponsor: Fligen Systems Pvt. Ltd.

We are thrilled to acknowledge and extend our heartfelt gratitude to **Fligen Systems Pvt. Ltd.** for their invaluable support and sponsorship. Based in Khandve Nagar, Wagholi, Fligen Systems Pvt. Ltd. has played a pivotal role in our journey, significantly contributing to the success of our drone project.



### Sponsorship Details:

**Fligen Systems Pvt. Ltd.** generously provided us with essential drone parts that were crucial for the assembly and functionality of our drone. Their sponsorship included high-quality components such as motors, ESCs, servos, and other critical hardware, ensuring that our drone met the highest standards of performance and reliability.

In addition to providing the necessary parts, Fligen Systems Pvt. Ltd. offered expert guidance and technical support throughout the development process. Their experienced team provided valuable insights and recommendations, helping us overcome technical challenges and optimize our drone's design and functionality.

Furthermore, Fligen Systems Pvt. Ltd. extended their support by offering us access to their workspace for both work and flight testing. This generous provision of facilities enabled us to efficiently assemble, test, and refine our drone in a professional environment, greatly enhancing our project's development.

We would also like to express our sincere appreciation to **Mr. Adtiya Wadhokar**, the **Managing Director of Fligen Systems Pvt. Ltd.**, for his leadership and unwavering support. His vision and commitment to innovation have inspired our team and greatly enhanced our project.

Their support has been instrumental in advancing our project, and we are deeply appreciative of their commitment to fostering innovation and excellence in the field of drone technology. Fligen Systems Pvt. Ltd.'s contribution not only enhanced our project's capabilities but also inspired us to push the boundaries of what we can achieve.



Collab Photo with **Mr. Aditya Wadhokar**

- List of components provided by Fligen Systems Pvt. Ltd.

Sr.no	Name	Unit
1	S500 Frame	1
2	SUNNYSKY A2212 980 KV (CW)	2
3	SUNNYSKY A2212 980 KV (CCW)	2
4	Bonka 5200 Mah 4S 40C LIPO BATTERY	1
5	Bonka 3300 Mah 3S 45C Lipo Battery	1
6	Radiomaster RP1 V2 ExpressLRS Nano Receiver	1
7	Orange HD Propellers 1045 ABS DJI Black(2CW,2CCW)	1
8	SpeedyBee SB-F4V3-50-STACK	1
9	TowerPro MG90S Mini Digital Servo Motor (180° Rotation)	2
10	3-D Printed Parts (Gripper, Stack Mount, Battery Mount)	-

The total sponsorship provided by Fligen Systems Pvt. Ltd. amounted to Rs. 33,318.

## **DRONE RESEARCH, DESIGN AND HARDWARE IMPLEMENTATION**

### **INTRODUCTION**

The drone project began with extensive research in June, followed by hands-on work in July and August, focusing on the assembly, calibration, and optimization of the drone. Throughout the project, we encountered and resolved numerous technical challenges, conducted flight tests, and continually refined the design. This report documents the evolution of the drone and its components, highlighting the key technical decisions that improved the drone's performance leading up to the competition.

### **Component Procurement, Initial Assembly and Integration (July 2024)**

#### Component Confirmation and Procurement (Week 1)

In the first week of July, our main focus was finalizing the component list and coordinating with our sponsor to ensure the swift procurement of parts. The sponsor took responsibility for sourcing the components and leveraged their industry contacts to expedite the process.

1. Objective: Finalize the necessary components and manage procurement through the sponsor.

#### 2. Sponsorship and Procurement

- Our sponsor handled the procurement efficiently, using their network to secure all essential parts for the drone.

- Quotations were confirmed, and the sponsor approved the necessary expenditures, ensuring that the parts were delivered quickly and without delays.

#### 3. Procurement Process:

- Thanks to the sponsor's contacts, the components arrived promptly, allowing us to stay on schedule.

- By the end of Week 1, most critical parts were in hand, and we were ready to begin the assembly phase the following week.

#### 4. Challenges:

- Minor adjustments were required based on component availability, but these did not significantly affect the project's timeline.

- The efficient procurement ensured no significant delays.

#### 5. Next Steps:

- With the components secured, we began serialization, frame assembly, and preparing for motor and ESC installation in Week 2 of July.

This week was crucial for laying the groundwork, as the sponsor's swift procurement ensured we had everything needed to progress smoothly into the assembly and testing phases.

### **Component Serialization and Frame Assembly (Week 2)**

Objective: Organize and assemble the core components, including the frame, motors, ESCs, and gripper.

Progress:

- Serialized all essential components (motors, ESCs, flight controller) for structured assembly.
- Assembled 50% of the frame, including arms, the top plate, and the power distribution board (PDB)
- Gripper design completed.

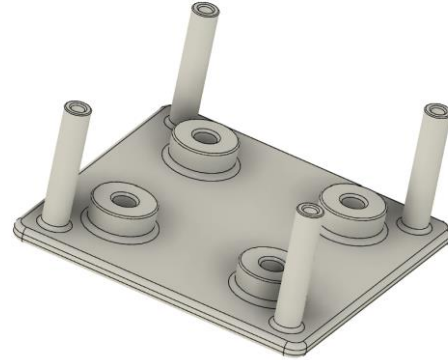
Challenges:

- The SpeedyBee flight controller stack did not fit the frame correctly.
- Motor wires were too short to connect to the ESCs.
- The battery didn't fit the allocated mount.

Solutions:

- Designed a custom mount for the flight controller to ensure a proper fit.
- Extended motor wires with female bullet connectors to resolve connection issues.
- Redesigned the battery and claw mounting bracket to address fitting issues.





Img1- Team working in Fligen System's Workspace; Img2- Drone fitted with all necessary components ready for first flight; Img3- Gripper Prototype-1 Design; Img4- FC Stack Mount design.

### **Initial Calibration and Flight Preparations (Week 3)**

Objective: Complete the drone's calibration and configure the transmitter and receiver.

Progress:

- Successfully updated the ELRS firmware and completed the Tx and Rx binding.
- Finalized flight controller configuration and designed a new battery mount.

Next Steps: Prepare for the first flight test and address any issues that arise

### **Simonk ESC Integration and Motor Testing (Late July)**

The initial tests revealed significant vibrations even after switching from BLHeli-S to BlueJay firmware in the 4-in-1 ESC. While BlueJay reduced the vibration readings, it did not completely resolve the problem, leading to a decision to switch to Simonk 30A ESCs rated for 3S batteries. These new ESCs completely solved the vibration issue as the motors no longer produced excessive vibrations, showing that loose fittings were not the root cause, as initially assumed.

### **Flight Testing and PID Calibration (Late July and Early August)**

Objective: Conduct test flights, calibrate the PID settings, and optimize the flight characteristics.

**Progress:**

- The first test flight revealed several issues:
  - Drone wobbling mid-air due to incorrect PID values.
  - Motors not starting uniformly, leading to imbalance.
  - Motors not rotating when armed, requiring a throttle setpoint adjustment.

### Solutions:

- Adjusted the PID settings (increased P and D, decreased I).
- Disabled AirMode and set a minimum throttle RPM setpoint of 1150.
- The Simonk ESC's 0.46 kHz frequency provided slower but more stable motor responses.

Next Steps: Further PID tuning and motor testing in flight conditions.



Img 1,3- Flight Training and gripper testing on drone; Img 2- Final Gripper Design

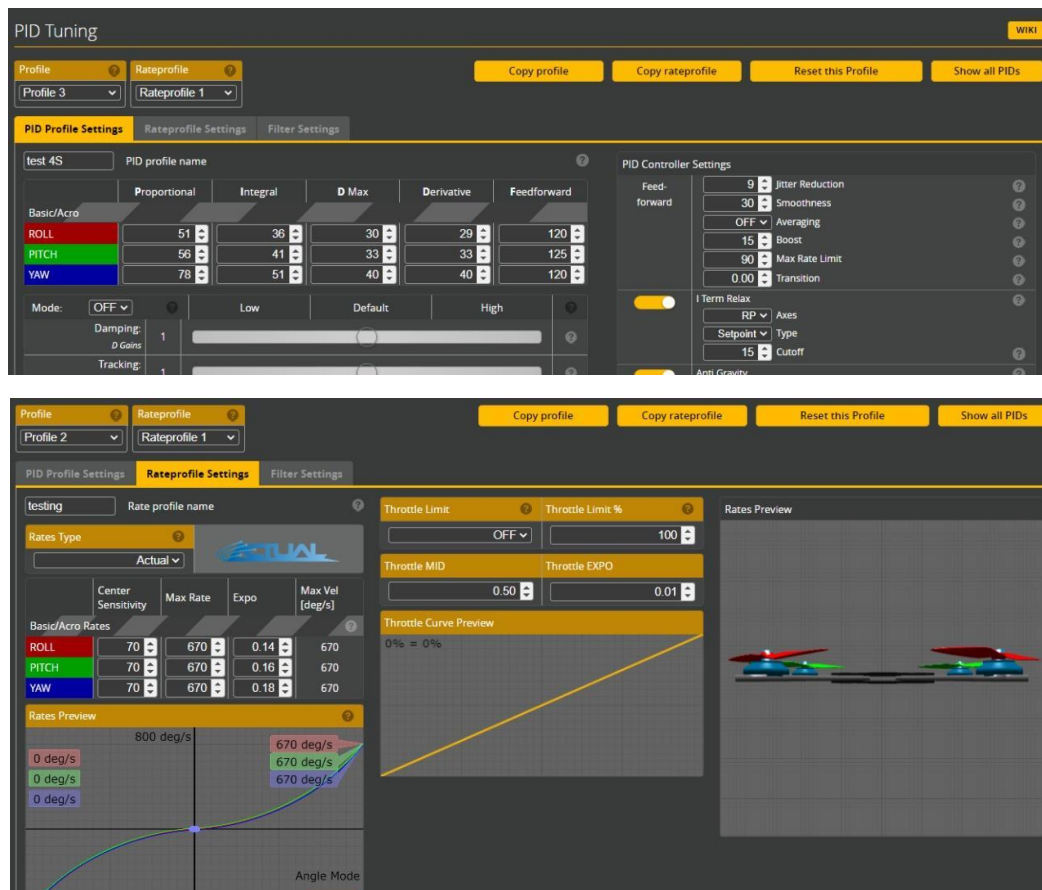
### Continuous Testing, Design Refinements, and Calibration (August 2024)

In August, major refinements were made to both the drone's structure and its components. One critical change was the shift from a bottom-mounted to a top-mounted battery configuration. Initially, the heavy battery was positioned far from the flight controller, negatively affecting the drone's centre of gravity and flight stability. By moving the battery above the flight controller and using brass standoffs along with a 2mm carbon fiber sheet for mounting, the centre of gravity was significantly improved. This change enhanced the drone's flight characteristics, offering better control and providing space to mount the gripper underneath the drone.

Simultaneously, the design of the gripper underwent revisions. During the first two weeks of July, the initial prototype of the gripper was completed, made of PLA. While functional, it was clear that there was significant room for improvement in terms of weight and size. With guidance from Fligen Systems' Chief Design Engineer, we started redesigning the gripper. Refinements led to a significant reduction in weight and size without compromising performance. The new prototype was much improved, and after several rounds of testing, it was mounted on the drone, where it functioned effectively during test flights and later in the competition.

In addition to these changes, we replaced the stock 2-point carbon fiber landing gear, which had a narrow 15 cm opening, with a more robust 4-point ABS landing gear that offered a wider 24 cm

opening. This was crucial for precision during the competition's payload tasks, as it provided the pilot with more margin for error when picking up the box.



### Battery and ESC Optimization

While originally planned to use a 4S battery for better performance, we encountered issues with the Simonk ESCs, which were rated for 3S batteries. After purchasing new 30A Simonk ESCs compatible with 4S, we tested them alongside the 4S battery. While the performance and RPM increased dramatically, the motors began to overheat, and the drone became difficult to control due to the heavier battery shifting the centre of gravity. Despite extensive PID tuning, the drone's performance was still suboptimal. Ultimately, we decided to stick with the 3S battery configuration, which offered stable performance and reduced weight. Further PID tuning allowed us to maximize the drone's efficiency with this setup.

### Flight Training and Final Preparations (Mid to Late August)

As the project moved toward the final stages, we conducted rigorous flight training sessions in a simulated competition environment. An arena was built in the old Library area, similar to the competition's layout, to provide realistic training scenarios. Despite time constraints, we performed



continuous test flights, fine-tuned the PID, and optimized the drone's performance. Our focus was on flight stability, control precision, and refining the integration of the gripper for competition tasks.

## CONCLUSION

What we learned from these challenges during development-

1. Lack of Technical knowledge and Experience costed us with precious time and money.
2. The way we do research is wrong, it is very surface level, we should read more forums and blogposts.
3. We try to find solutions to the problem without knowing the proper cause of the problem.
4. We lack team members who have Mechanical or Aeronautical background.

The drone project evolved through continuous testing, iterative refinements, and strategic hardware changes. Each challenge, whether related to vibrations, PID calibration, or structural modifications, was addressed methodically. By the end of August, we had a well-tuned drone with stable flight characteristics, improved centre of gravity, and a functional gripper, ready for competition.



**COMPETITION PASSES AND SCHEDULE**



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**WORLD ROBOTICS CHAMPIONSHIP 2024**

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**DATE: 24-27 AUG 2024**  
VENUE: NOIDA INDDOR STADIUM, SECTOR 21,UTTAR PRADESH

Logos: Government of India, AICTE, DPES, Abira

**TECHNOXIAN**  
WORLD ROBOTICS CHAMPIONSHIP

**8th Edition**  
DRONE RESCUE





























**PARTICIPANT**  
Suraj Pawar  
WRC280224435

**TECHNOXIAN**  
**WORLD CUP 2024**  
NOIDA STADIUM COMPLEX  
SECTOR 21, NOIDA

QR Code  
Team Hawks

**24 25 26 27**  
**AUG 2024**

**GROUP D**

SCHEDULE	COUNTRY	CLUB/TEAM
SET-13 26 Aug 2024 12:00PM to 12:20PM	 	Probo Club WRC8311924710
	 	The Zeppelin WRC3411124362
	 	M&S Sky Sirens WRC2436544352
	 	SPEED BIRD WRC5992944307
SET-14 26 Aug 2024 12:30PM to 12:50PM	 	Optimus Prime WRC254404273
	 	Aurora WRC2883054213
	 	Ankuram Robo WRC2737124947
	 	THE OPTIMISTS WRC5510654158
SET-15 26 Aug 2024 01:00PM to 01:20PM	 	Robo Bot WRC4526248736
	 	Veltech Aviator WRC6077804139
	 	Team Thestral WRC6502402772
	 	IMEC WRC6091544907
SET-16 26 Aug 2024 01:30PM to 01:50PM	 	Tribrid WRC661534545
	 	Team Hawks WRC280224435
	 	Vicharaka WRC2899144432
	 	Robotics Club WRC9975324416

## **DAY 1**

**DATE: 24/08/2024**

### **DRONE INSPECTION**

On the first day of the event, from 9:00 AM to 11:00 AM, the drone inspection was conducted. The inspection was a critical part of the competition, as it allowed the judges to evaluate the design, construction, and overall innovation of the participating drones.

Our drone was subjected to rigorous scrutiny, with particular focus on several key parameters:

- **Design Construction:** Judges assessed the drone's overall build quality, focusing on the robustness of the structure, material choices, and how well different parts of the drone were integrated.
- **Aerodynamic Performance:** The drone's aerodynamic profile was analyzed, with attention to the efficiency of the propellers, weight distribution, and airflow.
- **Innovation:** This was a critical factor, as the competition encouraged teams to bring new and creative ideas. Our drone's unique feature was its modular design, which allowed for quick replacement of parts and components in case of damage during flights.

The inspection process was thorough, and we received positive feedback from the judges on the modularity and innovation of our design. However, they also pointed out areas where minor improvements could be made, particularly regarding weight optimization and wiring organization. This feedback helped us refine our strategy for the next stages of the competition.

### **Team Parade and Technoxian 2K24 Inauguration**

Following the drone inspection, all teams gathered for the official parade, which marked the inauguration of Technoxian 2K24. 60 Teams participated, each showcasing their national pride through flags and banners.

The parade was a vibrant and energetic affair, with participants and spectators alike sharing a collective sense of excitement and anticipation. Our team proudly represented DPES, and the parade offered us a moment to appreciate the sheer diversity of talent and innovation present at the competition.

The inauguration ceremony was followed by speeches from notable figures in the field of robotics and aerospace engineering. They emphasized the importance of creativity, collaboration, and pushing the boundaries of what technology can achieve.

**Team Parade at Technoxian 2K24 Inauguration:**



## DAY 2

**DATE: 25/08/2024**

### OBSERVING COMPETITIONS

Day 2 was dedicated to observing various competitions and preparing ourselves for the upcoming challenge. We took the opportunity to closely monitor the performance of competitors in different categories, including the Drone Rescue Challenge and Drone Racing events.

The Drone Rescue Challenge involved the use of drones to locate and deliver aid packages to designated rescue zones, simulating real-world disaster scenarios. We observed how various teams approached the challenge, with some focusing on speed while others prioritized precision and stability.

By observing other teams, we gained valuable insights into the diverse strategies and technologies used. Teams that excelled in the challenge often had drones that were lightweight, highly maneuverable, and equipped with advanced sensors for navigation. These observations prompted us to make last-minute adjustments to our own drone, optimizing for agility and responsiveness. We also observed other challenges that were taking place at the event.

### Team Strategy Session

In the afternoon, we held a strategy session to review our drone's performance during inspection and finalize our approach for the competition day. We identified areas for improvement, particularly in terms of weight distribution and flight control. After making minor adjustments to the drone, we conducted a series of test flights to ensure everything was functioning as expected.







## DAY 3

**DATE: 26/08/2024**

### GROUP ASSIGNMENTS AND FLIGHT TIME

Day 3 marked the most important part of our participation—competition day. We were assigned to Group 16, which included three other competitors. Each team was given a fixed flight window to showcase their drone's capabilities.

Our flight time was 5 minutes and 42 seconds, which, although competitive, fell slightly short of our initial expectations. The flight involved navigating through a series of obstacles while maintaining speed and precision. Our drone performed well in terms of maneuverability and stability, but we encountered some difficulties with battery efficiency, which slightly impacted our flight time.

### Performance Review

The judges evaluated each team based on several criteria:

- **Flight Stability:** Our drone's modular design allowed it to maintain excellent stability throughout the flight, especially when navigating sharp turns.
- **Speed and Agility:** Despite minor setbacks, our drone's speed and agility were competitive, enabling us to complete the obstacle course in a relatively short time.
- **Innovation:** The judges appreciated the unique modularity of our drone, which allowed for easy component replacement—a feature that could be valuable in real-world applications.

In comparison to the other teams in our group, we performed well, but there were a few areas that required improvement, particularly in battery management and flight endurance.





## DAY 4

DATE: 27/08/2024

### PRIZE CEREMONY & CERTIFICATE DISTRIBUTION

The final day of Technoxian 2K24 was dedicated to the prize and certificate distribution ceremony. It was a day of celebration, not only for the winners but for all participants who had contributed to making the event a success.

Although we did not place in the top three, we were recognized for our innovative design and teamwork, which earned us a special mention in the competition's innovation category. The prize distribution was followed by a closing ceremony, where all teams were awarded certificates of participation.

The event provided us with an excellent opportunity to reflect on our journey. We were proud of our performance and the hard work that had gone into preparing for the competition.



Expenditure from Our End

Sr. no	Name	Unit	Website	Price (in Rs)
1	694ZZ Bearing 4x11x4 Stainless Steel Shielded Miniature Bearings - 2 Pcs	2	Robu.in	84
2	High Quality Ultra Flexible 18AWG Silicone Wire 5 m (Yellow)	1	Robu.in	200
3	M3 X 50mm Female to Female Brass Hex Threaded Pillar Standoff Spacer- 12 Pcs.	1	Robu.in	271
4	55mm (2.2inch) Blade Propeller Propeller for 6x15mm, 7x20mm 8.5x20mm Coreless Motor DIY Micro Quadcopter	2	Robu.in	136
5	Orange HD Propellers 1045(10X4.5) ABS DJI Black 1CW+1CCW-1pair- Premium Quality	12	Robu.in	1128
6	ReadytoSky Simonk 30A ESC with Banana Connector (Female)	4	Robu.in	1626
7	ABS Plastic Landing Gear for Quadcopter (Pack of 4) - Made in INDIA	2	Robu.in	310
8	EasyMech M3 X 20mm CHHD Bolt and Nut Set-20 pcs.	1	Robu.in	58
9	EasyMech M3 MS Plain Washer-100pcs.	1	Robu.in	68
10	EasyMech Set of M4 X 30 MM Socket Head Cap (Allen) Bolt and Nut-12 pcs.	1	Robu.in	98
11	M6 Propeller Prop Nut Cap CW CCW for 2212 920KV Brushless DC Motor	1	Robu.in	64
12	30cm Lipo Battery Strap Belt Reusable Cable Tie Wrap	2	Robu.in	148
13	TowerPro MG90S Mini Digital Servo Motor (180° Rotation)- Normal Quality	4	Robu.in	398
14	SafeConnect Nylon TConnector Male to XT-60 Female Connector Battery Adapter Lead	1	Robu.in	88
15	Orange HD 51499 Hurricane PC 3 Blade Propellers 2CW+2CCW - Whisky Colour	1	Robu.in	163
16	Bonka 11.1V 3300mAh 35C 3S Lithium Polymer Battery Pack	1	Robu.in	2500
17	TowerPro SG90 Servo Motor (180° Rotation)- Good Quality	1	Robu.in	143
18	Vernier Caliper	1	Flyrobo	475
19	Weighing Machine	1	Amazon	300
20	Simonk ESC 30A	1	Robu.in	1700

21	Hardwares	1	Offline	568
22	Train Tickets	22	IRCTC	21418
23	Hotel	5 Rooms	OYO	23000
24	Travelling	6 Days	Metro,Cabs	8000
25	Food	6 Days	Restraunts	6000
	<b>Total</b>			<b>68944</b>

Expenditure made from Funds provided by College

Sr. no	Name	Unit	Website/Shop	Price (in Rs)
1	Battery Charger	1	Robu.in	5048
2	Website Hosting Charges	-	Hostinger	3101
3	Club Jerseys	11	Misfits	4331
4	Team Jersey	11	Misfits	5198
5	Competition Registration	-	Robu.in	2950
6	Components	-	Robu.in	6796
	<b>Total</b>			<b>27424</b>

ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>DRONE SHAURYA EXPO</b>	Date: 19 and 20 /09/2024

### Event Overview:

On the 19th and 20th of September 2024, students from the **Drone Club of Dhole Patil College of Engineering (DPCOE)** participated in the **Drone Shaurya Expo**, organized by the **Trade Promotion Council for Geospatial & Space Industry (TPCGSI)** in collaboration with **Ajeenkya DY Patil School of Engineering, Lohegaon**. The event, held alongside **Fligen Systems Pvt Limited**, showcased cutting-edge drone technologies, drawing participation from students, industry experts, and drone enthusiasts.



### Student Participation:

The students from DPCOE proudly displayed two of their innovative drones:

1. **Daksh** – A payload-carrying drone designed for heavy-duty applications.
2. **Sky Drone** – An FPV (First-Person View) drone focused on aerial exploration and immersive piloting.

Both drones attracted significant attention for their advanced capabilities, with the students

impressing the audience with their technical knowledge and practical demonstrations.



### **Industry Engagement:**

The students had the opportunity to interact with professionals from **Fligen Systems Pvt Limited** and other industry experts, gaining valuable insights into real-world drone applications. The event provided a platform for the students to enhance their knowledge and network with leaders in the drone industry.

### **Conclusion:**

The participation of the **DPCOE Drone Club** at the **Drone Shaurya Expo** was a successful and enriching experience. The students' innovative drone designs, coupled with their expertise, were well-received, highlighting the promising future of drone technology in academic and industrial settings.

ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>STUDENT TECHNICAL SYMPOSIUM AND EXPOSITION</b>	Date: 26 and 27 /09/2024

**Event:** Student Technical Symposium and Exposition

**Organizer:** AISSMS College of Engineering, Pune

**Dates:** 26th and 27th September 2024

**Event Type:** Technical Symposium and Exposition

## INTRODUCTION

The Drone Club from Dhole Patil College of Engineering participated in the **Student Technical Symposium and Exposition**, held at **AISSMS College of Engineering, Pune**, on the 26th and 27th of September 2024. This event featured a range of technical competitions, including an FPV (First-Person View) drone racing challenge, where participants navigated through complex obstacle courses.

## PARTICIPANTS

**The following members of the Drone Club represented our institution at the event:**

- Ashish Paul (TE E&TC)
- Kedar Jagadale (TE E&TC)
- Ajay Savare (TE E&TC)
- Harsh Pandey (TE E&TC)



## EVENT OVERVIEW

The symposium was a two-day event that included a variety of technical presentations, exhibitions, and networking sessions. It attracted participants from various engineering colleges and institutions across the region. The focus was on fostering innovation and encouraging students to showcase their technical prowess.

## DRONE CLUB CONTRIBUTION

The symposium featured various technical events and exhibitions, with the FPV drone racing being a highlight. In this competition, participants piloted FPV drones through a challenging obstacle course, which tested their skills in precision flying, speed, and maneuverability. The event attracted teams from multiple institutions, creating a highly competitive and stimulating environment.



## ACHIEVEMENTS

We are pleased to report that our team secured **3rd rank** in the competition. This achievement is a testament to the hard work, creativity, and technical skills demonstrated by our members. It also reflects the high standards maintained by our Drone Club and its commitment to excellence in technological innovation.





## CONCLUSION

The participation in the Student Technical Symposium and Exposition was a valuable experience for the Drone Club. It provided us with an opportunity to showcase our project, engage with peers and experts, and gain insights into the latest technological trends. Securing the 3rd rank and 6<sup>th</sup> rank among 25 Teams. Among numerous participants was a significant accomplishment and has motivated us to further enhance our skills and projects.

ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>TECHNOXIAN CERTIFICATE</b>	Date: 24 and 27 /08/2024



ACA/R/56	<b>DEPARTMENT OF E&amp;TC ENGINEERING</b>	Academic Year:2024-25
Rev:00		Semester : ODD
Date: 15.12.2016	<b>SHAURYA EXPO</b>	Date: 19 and 20 /08/2024



