AERO CLUB IIT MADRAS

GETTING HIGH THE WRIGHT WAY

Who are we?

The aeromodelling and aerial robotics club of IIT Madras dabbles in anything and everything that flies. This includes everything from fixed wing RC aircraft to multirotors to ornithopters to autonomous flight.

What we do:

Design and fly planes and drones in regular flying sessions

Workshops and hands-on sessions on aeromodelling and aerial robotics

Innovative projects implementing new technologies to tackle real-world problems

Participate (and win) in prestigious aeromodelling and aerial robotics competitions

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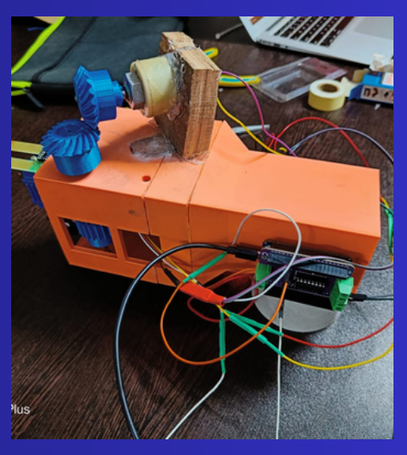
Some of our past successful projects and events

Project GAIA

A one-of-a-kind multirotor UAV, the GAIA hexacopter uses soil sensors and a robotic arm for efficient afforestation, thus using technology to restore natural ecosystems.



The Communication Relay Drone (CRD)

Project CRD is a relay drone, for use in remote environments where it is difficult to get a GPS signal. The drone flies high, collects the GPS data and relays it back to the user's phone.

Project DroCode

Due to remote location of the Institute Hospital, a medical delivery drone was developed. A Raspberry Pi(RPI) and a smartphone with an IOT dashboard was designed to give signals to the servo to drop payloads.

The SkyCraft Workshop

With over 200 attendees and 30 planes built and flown, SkyCraft was the biggest event yet in the club's history. The planes were built from scratch and flown completely by the participants.

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Our ongoing projects

Project PlasmaWings

Aimed at delivering essential medical supplies to remote regions quickly and efficiently, PlasmaWings is working on building a fully autonomous fixed wing UAV with a host of features to enable this.

Project WingFlap

WingFlap aims to build versatile ornithopters to increase efficiency at small scales. This is being done using various innovative materials and methods, such as 3D printing.

The Drone Swarm

While a single multirotor is versatile as is, a coordinated swarm of them would be that much more so. This project aims to build all the necessary software in order to create and control a functioning drone swarm.

Project ICU

Project ICU aims to build a surveillance drone which can combine the efficiency, speed and quietness of a fixed wing with the maneuvrability of a multirotor using VTOL mechanisms.

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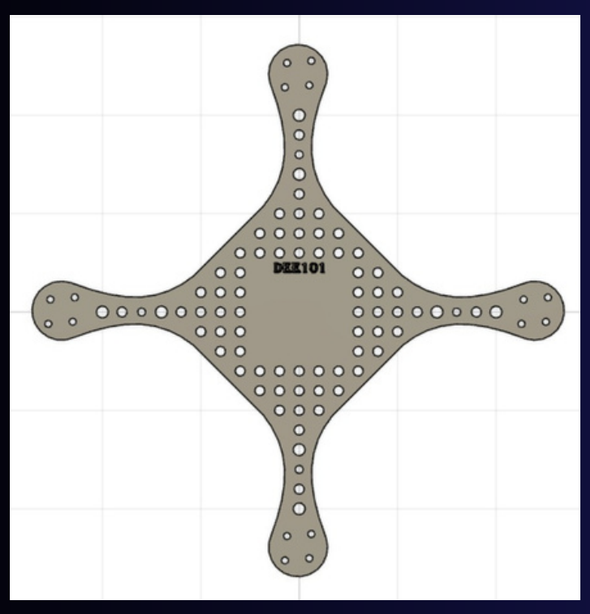
Competitions we participate in

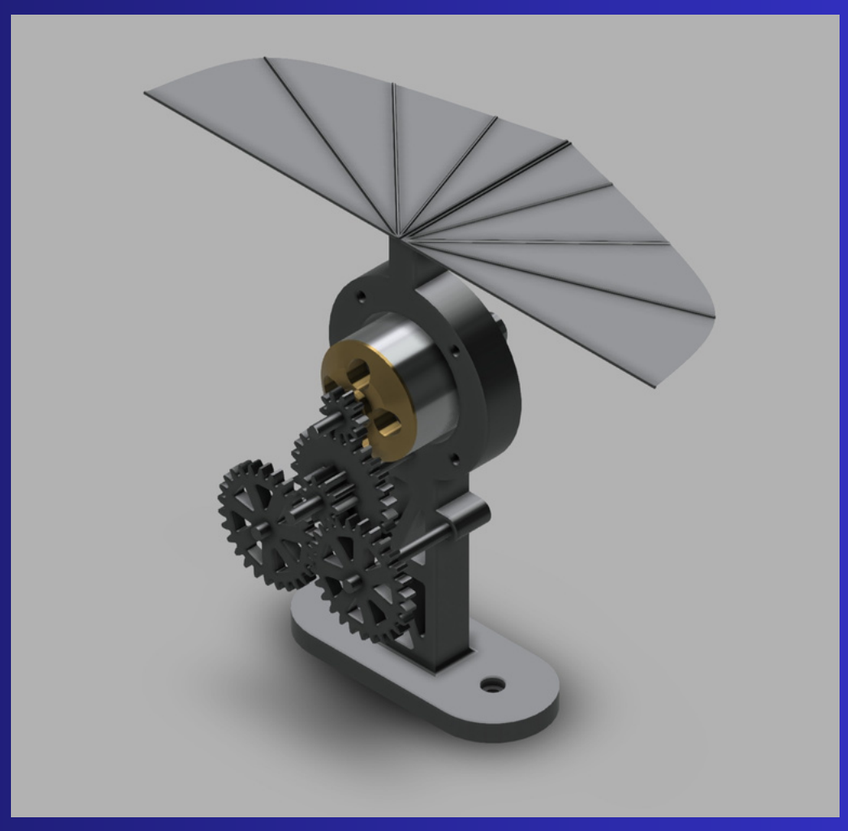
SAE AeroThon

Organized by SAE India, this is a huge nationwide competition, where teams compete to solve the problem statement of designing an innovative autonomous UAV with image recognition. IIT Madras' team has placed third out of 89 teams in the first stage, and is one of only 20 teams to qualify for the second.

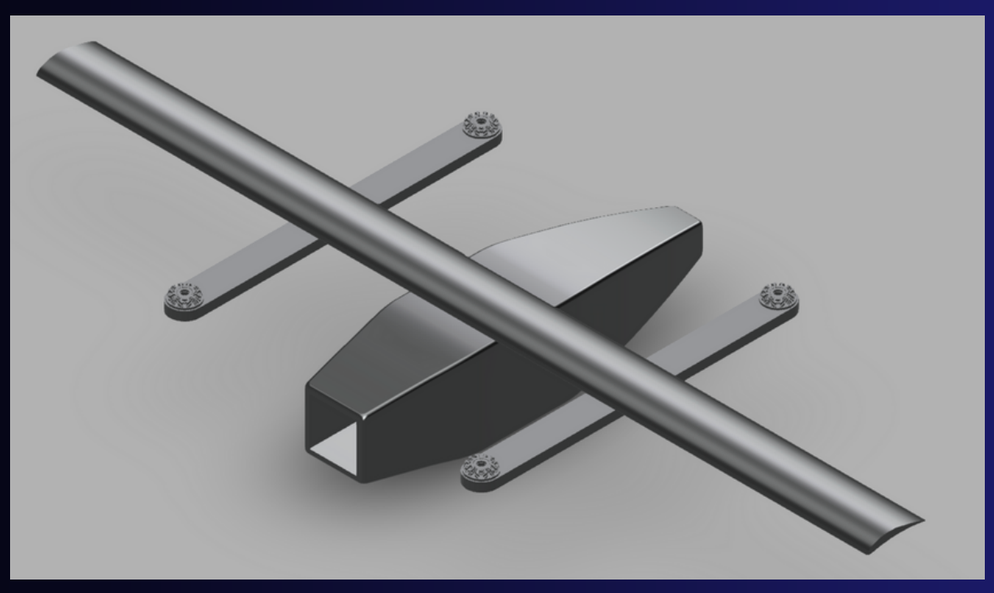
Glimpses of our work



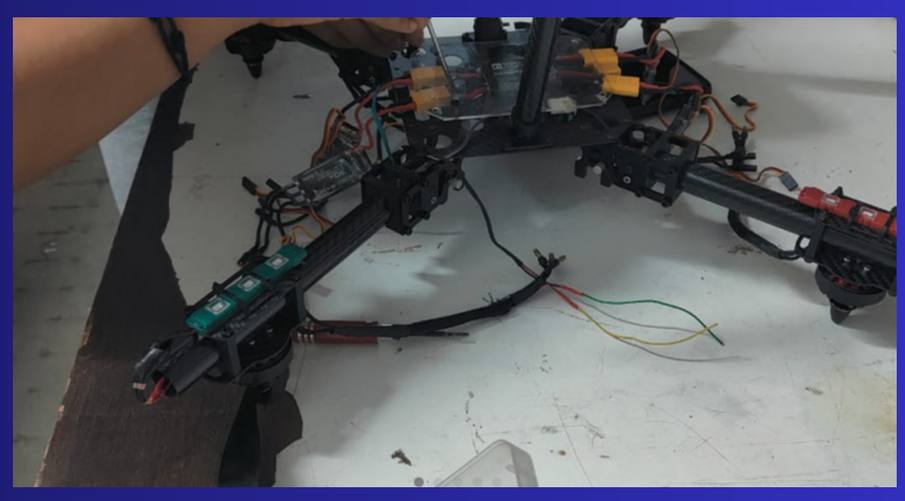
DESIGNED AND 3D PRINTED A FRAME FOR DRONE SWARM PROJECT.



DESIGN ITERATION OF THE MECHANISM BEHIND THE WINGFLAP PROJECT.



CAD MODEL OF THE VTOL QUADPLANE FOR PROJECT ICU.



CONNECTING HARDWARE AND ELECTRONIC COMPONENTS TO A DRONE.