Photo Intro

Description of me

Portfolio

Photo banner - Capstone project

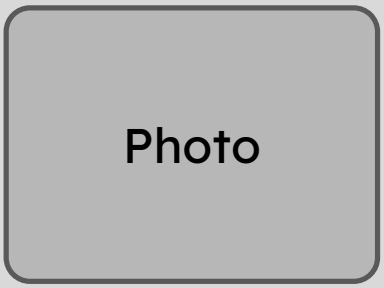
Descrition

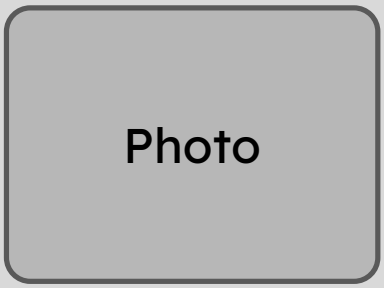
Photo

Photo

Photo banner - Capstone project

Descrition





Youtube link : www.youtube.com/XXXXXXX (If there is a link in the info pages)

Photo banner - Hackaton

Descrition

Text Resume Here

Contact Camille Dubost :

Email Address : camillecesardubost@gmail.com

Phone number : +971 52 912 8453

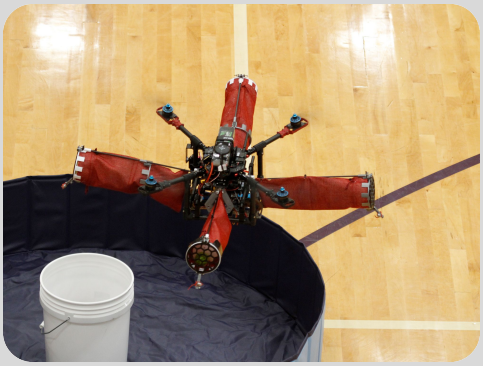
Infos

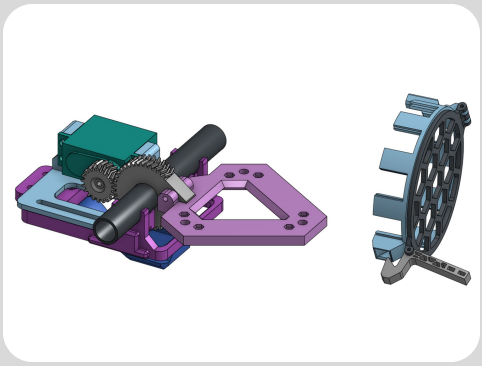
ARISE - Aerial Robotics Capstone Competition - April 2024
Roles : Team captain. Technical Lead on payload design

Developed a payload system designed to deliver a total of 100 balls to 4 distinct targets. Created 4 lightweight fabric arms, each carrying 25 balls, which rotated downward for efficient release. Each arm featured a locking flap at the end that opened automatically based on orientation. Each arm was powered by a 35 kg high-torque servo, coupled with a 3D-printed gear mechanism, allowing the arms to rotate between 90 and 100 degrees.

Additionally, I built custom Li-ion batteries to extend range without added weight, assembling a 4S2P - 116.8V 8400mAh pack using 21700 Molicel P42A cells.

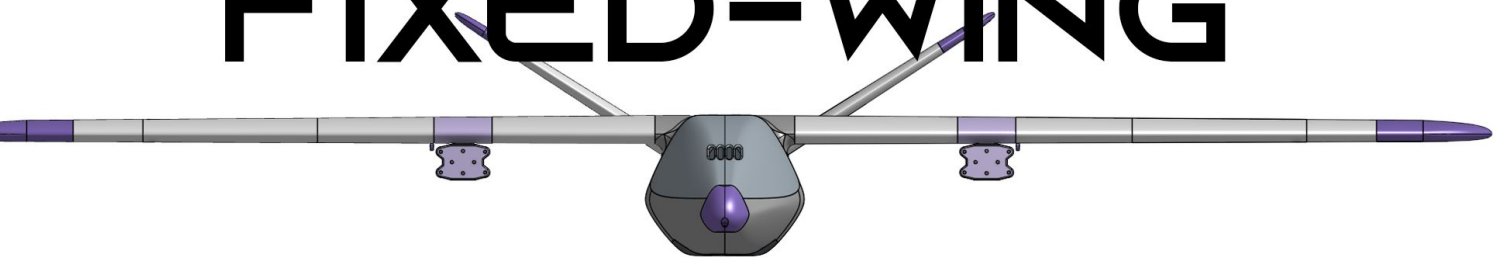
Documented all technical specifications in a comprehensive 57-page report.





Link video : https://www.youtube.com/watch?v=-QIHf5DdWGo

FIXED-WING



Building a small plane had been a dream of mine since I began exploring electronics and UAVs.

I created multiple prototypes with bodies made from either foam or 3D-printed plastic parts. After refining and detailing 8 3D designs using Onshape CAD software, my latest prototype has a streamlined shape to allow for easy add-ons. It is a twin-motor plane with a V-tail, a wingspan of 130 cm, and weighs 800 grams without electronics. I printed it in PLA+ but plan to test lightweight PLA soon. This latest prototype took flight in August 2024.

*OLD VERSON

*LAST VERSION

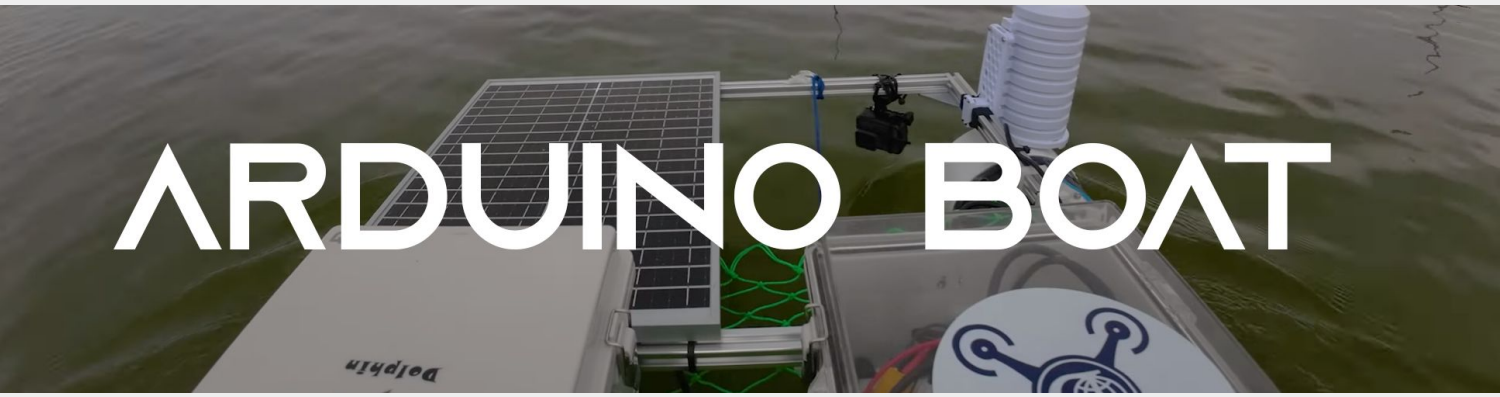
Passionate about aeronautics and astronautics, drones have become my favorite hobby. After learning to pilot a Mavic, I began building my own FPV drones. I spend hours designing, testing, and refining them based on their specific purposes. I use some for freestyle flying, larger ones—with the capability to carry cameras and fly long-range—for filming nature, and others optimized for racing.

Through this, I've gained a lot of knowledge about electronics and precise flight control, especially for racing. I still crash regularly, though! My drone frames are made of carbon fiber, with 3D-printed TPU protectors, but hitting a steel racing gate can still be pretty destructive. Maintenance and repair take quite a bit of time.

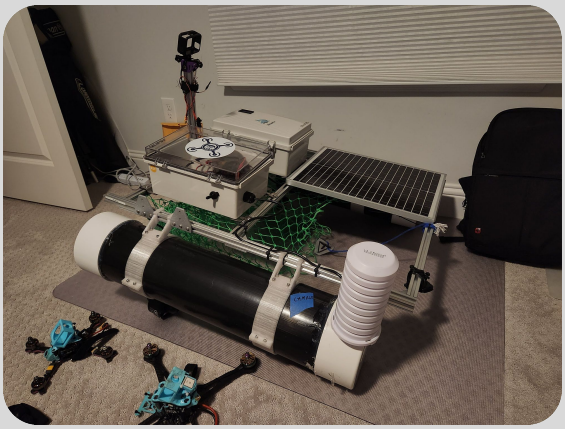
I'm always working to make my drones more efficient, whether by modifying carbon-fiber frames or enhancing them with custom Li-ion batteries.

Check out my flight videos and follow me on my YouTube channel!

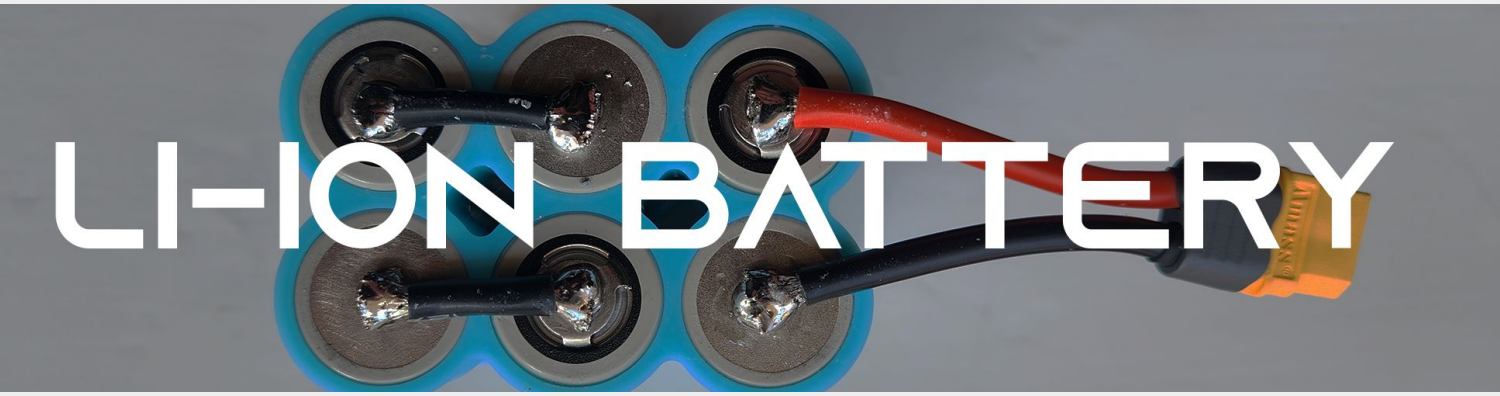
Link video :
https://www.youtube.com/watch?v=VOYRCmxQ5LM



School project completed in 10th grade. This solar-powered Arduino boat is capable of autonomously collecting debris from the water surface using a net and rake. It can also record atmospheric data.
How I made it? The main structure is built from 20x20 aluminum extrusions, supported by 2 floaters made of 6” PVC pipes, and propelled by 2 underwater propellers that steer using differential thrust. All electronics are protected in 2 separate waterproof plastic boxes: one containing the Arduino, receiver, and power distribution, and the other housing 2 6V lead batteries connected in series, along with the solar-powered MPPT.

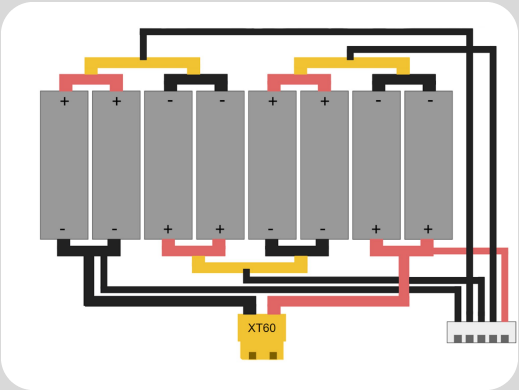


Youtube link :
https://www.youtube.com/watch?v=YFVOGMfQfrU



LI-ION BATTERY

For many of my UAVs (drones, fixed wings, and Capstone project), I built and used custom-assembled Li-ion batteries. These batteries are more energy-dense than the commonly used LiPo technology, providing UAVs with extended flight time. Additionally, at equal capacity, these custom-made batteries are more economical than off-the-shelf options. Building these batteries required precision and attention to avoid wiring errors. The downside of Li-ion batteries is their lower power output (Amps), which provides less thrust and doesn't handle rapid power surges well. For the Capstone drone, I made two 4S2P packs (photos below) and connected them in parallel to increase the current from 45A to 90A, effectively doubling the capacity.



Description of me:

A creative problem-solver driven by innovation and sustainability, aspiring to create impactful solutions and advance technology to explore space mindfully, ensuring a more resilient future.