2024-2025

UCI AeroZot Design Build Vertical Flight Competition Team

UCI AeroZot DBVF Team

Corporate Sponsorship Package

Vertical Flight Society at UCI

UCI Samueli School of Engineering
University of California, Irvine

TABLE OF CONTENTS

LETTER FROM THE LEADS

Dear Fellow STEM Enthusiast,

On behalf of the UCI AeroZot Design-Build-Vertical Flight team, we want to express our thanks for taking the time to review our corporate sponsorship package.

Design-Build-Vertical Flight is an annual flyoff competition held in an airfield in Maryland, where students design, build, fly(, and land!) an electric vertical takeoff and landing vehicle (eVTOL). This sponsorship package is crafted to support our team of about 19 members, who built a large quadcopter last year on a very limited budget. It taught us and set us up well for this year as we're trying to build a bigger and more complex winged eVTOL in preparation for next year's competition. This project gives our members real-world experience of the whole engineering process of designing, building, and prototyping among various sectors of engineering, such as hardware, electrical, and embedded systems.

Once again, we thank you for considering our sponsorship package. Your interest and support is a keystone to our goal of bringing our team to new heights!

Sincerely,
Anna Cheng
Business Sub-Lead
Asher Ding
Project Manager
UCI AeroZot Design Build Vertical Flight Competition Team
Electrical Engineering '28, Mechanical Engineering '27

WHY CONTRIBUTE

Thank you to all of our sponsors and donors for your continued support of our team. Your generous contributions supply parts to enable our team to apply their talents to register and compete in Maryland (outlined in the budget sheet). Upon request, we are glad to reveal our final design. *Any contributions count, such as supplying us with parts!*

In return for your donation, AeroZot would gladly advertise your sponsorship to promote STEM throughout different meetings and important events at UCI and display your business logo on our presentations, posters, and our final eVTOL as it performs against other teams.

$1000+

- Business logo on:
  - 2026 Annual Design Review
  - Teamwear
  - Poster during the Spring 2025 UCI Undergraduate Research Symposium
  - Final eVTOL
- May request a facility visit and formal presentation during build season

$750+

- Business logo on:
  - Poster during the 2025 UCI Undergraduate Research Symposium
  - Final eVTOL
- Invitation to eVTOL reveal

$500+

- Business logo on:
  - Final eVTOL
- Business website link on website

$250+

- Thank you letter with team picture
- Business name listed on website

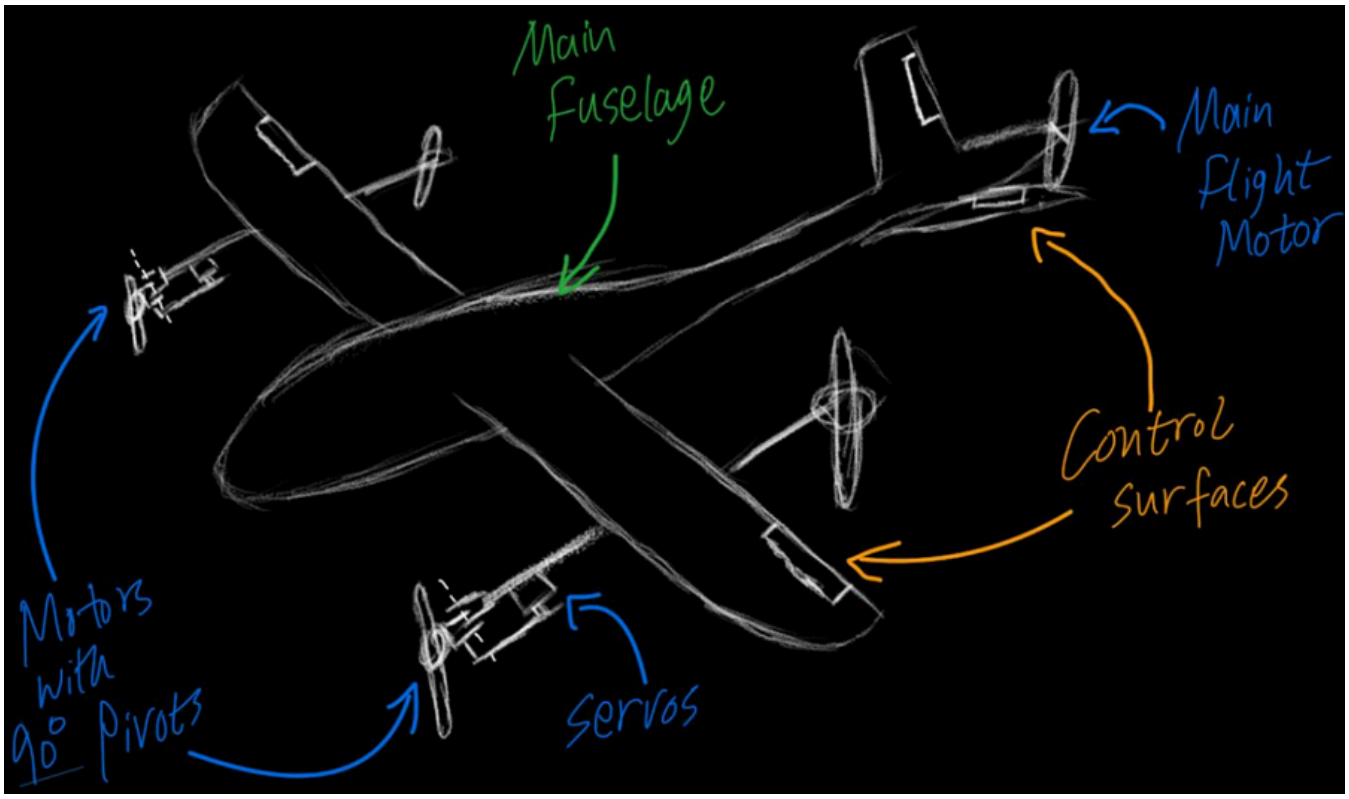
HOW TO CONTRIBUTE

Sponsoring AeroZot VFS is a great way to heighten your company's visibility and awareness in the community. In addition, tax-deductible donations are available by writing a check to the Mechanical and Aerospace Department of UCI and specifying that it is directed towards AeroZot VFS, Solmaz Sajjadi Kia.

If you are willing to donate parts, the parts budget list below outlines what we need. Feel free to contact us at either asherd1@uci.edu or chenga20@uci.edu, and we can discuss a meeting location and time to pick up the parts.

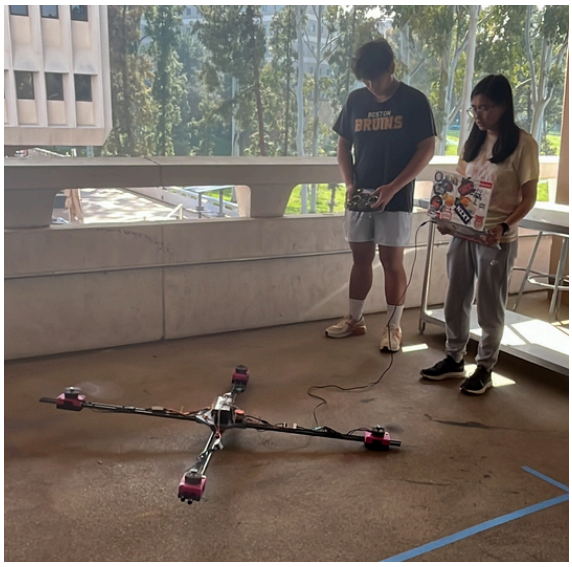
Alternatively, you can contact us, and we can discuss other ways you could donate (we do have a TAX EXEMPT ID).

OUR CURRENT DESIGN



This year, we plan on building a winged EVTOL consisting of 5 rotors with capabilities allowing us to take off vertically with various payloads, which would be attached with a standardized mount. The payload could be anything, but in this competition it aims to hold water to put out forest fires. The aircraft will be able to use 4 of its rotors to vertically lift off heavy loads and use 3 rotors in horizontal flight for high-speed delivery of the payload.

OUR 2023-24 PROJECT

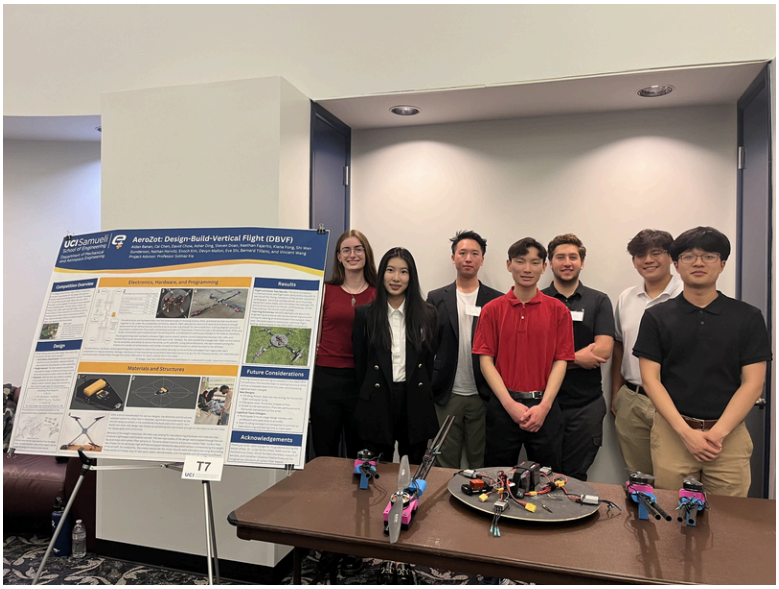


Hover Test

The photo on the right, taken on the 3rd floor of the UCI Engineering Tower, shows one of the many hover tests we conducted with the quadcopter.

Completed drone

As stated previously, the eVTOL we built last year was a standard quadcopter. The photo on the left shows the completed drone, with the constructed motor mounts, rods, propellers, flight controllers, propulsion system, etc.



Spring 2024 UCI Undergraduate Research Symposium

The photo on the left was taken at our research symposium booth and shows our UROP poster, some of our members, and the detached components to demonstrate each part of the quadcopter.

BUDGET SHEET - MATERIALS

Wing Design & Main Structures Team

Item Name	Quantity	Unit	Total Price	Reason	Link	Total
LiPo Battery 6S (motor)	1	$152	$152	Batteries for testing and the actual fly-off	https://a.co/d/98FoKfi	$629.92
LiPo Battery (controls)	2	$27	$54	Battery Control System	https://a.co/d/7c1TD8X	
1800KV Brushless Motor 3-6S (4pcs)	1	$136	$136	Five motors are required with enough thrust power and high thrust/weight ratio. 2 will rotate in a CW direction and 2 will rotate in a CCW direction and one will provide forward thrust in horizontal flight.	https://a.co/d/aijQWSb	
4 in 1 Electronic Speed Controller F55A PROII	2	$93	$186	A 4 in 1 ESC allows for a reduced weight and minimal space usage. We will need 2 inorder to control our 5 motor Evtol design.	https://a.co/d/9ksqTpf	
Control 20KG Servos (4 Pack)	1	$44	$44	6 servo motors are required to produce the tilt in all control surfaces and.	https://a.co/d/baH448h	
Tilt 25KG Servos (2 Pack)	1	$29	$29	2 Servos needed to tilt the front two motors for afterburners	https://a.co/d/9VGJSH1	
20 AWG Solid Core Wire Kit – 22 Gauge PVC Coated Copper Wires Pre-Tinned	2	$14.46	$28.92	Wiring for electronics	https://a.co/d/96W5GsM	

Avionics and Electrical Hardware Team

Item Name	Quantity	Unit	Total Price	Reason	Link	Total
PLA 1KG Spool	2	$23	$46	Printing brackets and parts Material for 3D Printer	https://us.store.bambulab.com/products/pla-basic-filament?variant=41078274654344	$330.00
Light-weight PLA 1KG	2	$45	$90	Lightweight material for 3d printer	https://us.store.bambulab.com/products/pla-aero?variant=42742670524552	
1 Quart Epoxy for layups	1	$70	$70	Epoxy for fiberglass and carbonfiber layups	https://a.co/d/cBfSiLj	
Carbon Fiber Rods 1 Meter	2	$35	$70	Carbon Fiber Rod for the main structure and wings	https://a.co/d/bDvfiai	
2mm Foam	2	$9	$18	Foam used to line main structure and wings	https://a.co/d/6VSDWQK	
Fiberglass Cloth, 6 Oz. Woven Roving 50" x 12 ft.	2	$18	$36	Fiberglass cloth to be used with epoxy to get a hard and strong outer shell	https://a.co/d/2jiyx5Q	

BUDGET SHEET - TRAVEL + COMPETITION

Travel Costs:

Item Name	Quantity	Unit	Total Price	Reason	Link	Total
Airfare (for 3)	1	$1,421	$1,421	Transportation to Maryland	https://bit.ly/3PjYc3W	$1,939.32
Hotel (3 nights)	1	$229	$229	Lodging in Churchville	https://bit.ly/40gH4lS	
Car Rental	1	$289	$289	Transportation within Maryland	https://bit.ly/49Zkwcy	