

Ryan James Howard

ryan.howard999@gmail.com
765-237-2169

<https://ryanjhoward.github.io/>
Irvine, California

EDUCATION

Purdue University, West Lafayette, IN BS in Aeronautical and Astronautical Engineering, Co-Op Certificate	Aug 2016 – May 2021
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WORK EXPERIENCE

Supernal, Airframe Designer <ul style="list-style-type: none">Designed 50+ metallic and composite primary structure partsPerformed 5+ trade studies comparing materials, joint architectures, and design layout.Own lower shell assembly and work collaboratively with 10+ key stakeholders across engineering	Oct 2021 - May Present
Aerospace System-of-Systems Lab, Research Assistant <ul style="list-style-type: none">Primary Author for “Assessing the Suitability of Urban Air Mobility Vehicles for a Specific Aerodrome Network” - accepted to AIAA Aviation 2021 ConferenceCompared 12 UAM vehicles across 10+ metrics relative to a defined UAM network to determine best suited vehicle(s) and vehicle configuration(s)	May 2020 - May 2021
ATA Engineering, Engineering Assistant, 5 Co-Op sessions <ul style="list-style-type: none">Analyzed 50+ parts for fracture and/or fatigue and documented results across 5+ projectsTested 4 vehicles (modal and flutter) and 250+ sensors	May 2017 - May 2020

PROFESSIONAL ORGANIZATIONS AND CLUBS

Vertical Flight Systems, President and Structures Lead	Jan 2019 – May 2021
Objective	Design, Build, Test, and Fly eVTOL vehicle w/ 100-pound payload
Member	Redesigned rotor arms. Created Bill of Materials. Tracked mass properties.
Structures Lead	Led 5-member team. Material trade study between Aluminum and Steel for manufacturing and weight. Reduced 10% of structural mass.
President	Led 25-member team and cleared obstacles to enable team’s success. Fundraised \$15k+, led 2 design reviews, coordinated logistics, and researched certification.

ENGINEERING PROJECTS (SEE MORE ON MY [WEBSITE](#))

Aircraft Design	CAD and FEA for VTOL Business Jet. Designed primary and secondary structures. Aerodynamic analysis.	Jan – May 2021
Lunar Drill	Designed, prototyped, manufactured, and tested lunar coring drill for NASA Micro-g NExT competition.	Jan – May 2021

TECHNICAL SKILLS (HOURS OF EXPERIENCE IN PARENTHESES)

CAD/FEA (2,500)	CATIA (1,000), Siemens NX (800), SolidWorks (400), FEMAP (200)
Programming (1,250)	MATLAB (800), Python (300), C (150)
Certifications	Drone Pilot (Part 107), MIG Welding, CNC Machining, 3D printing, Model-Based Systems Engineering, System-of-Systems Engineering
Interests	Advanced Air Mobility, electric aviation, transportation, chess