

Ryan Howard



ryan.howard999@gmail.com



765-237-2169



[linkedin.com/in/ryan-j-howard](https://www.linkedin.com/in/ryan-j-howard)



ryanjhoward.github.io

Summary

I am a passionate engineer striving to solve challenging aerospace problems. Through my balance of academic, professional, and extracurricular experiences, I have demonstrated that I am an effective communicator, dedicated team-member, and will be an asset to your team.

Experience (See More Projects on My [Website](#))

Vertical Flight Systems, President and Structures Lead Jan 2019 – May 2021

- Objective Design, Build, Test, and Fly eVTOL vehicle w/ 100-pound payload
- Structures Lead Led 5-member team. Material transition from Aluminum to Steel for manufacturing ease. Eliminated 10% of structural mass by decreasing tube cross-section. Created Bill of Materials. Documented vehicle mass.
- President Led 25-member team and cleared obstacles to enable team's success. Fundraised \$15k+, led design reviews, coordinated logistics with stakeholders, and researched certification.

Aerospace System-of-Systems Lab, Research Assistant May 2020 – June 2021

- Primary Author of "[Assessing the Suitability of Urban Air Mobility Vehicles for a Specific Aerodrome Network](#)" - accepted to AIAA Aviation 2021 Conference
- Compared UAM vehicles using economic metrics and simulating UAM trips
- Identified key aircraft characteristics of best-suited UAM vehicles

ATA Engineering, Engineering Assistant, 5 Co-Op sessions May 2017 - May 2020

- 1st Session Analyzed fracture and fatigue for launch vehicle components.
- 2nd Session Modal testing Stratolauncher, flutter testing, and calibrating sensors.
- 3rd Session Stress and fatigue analysis for aircraft components.
- 4th Session Design and Analysis (stress, frequency, bolted joint) for wide range of aerospace applications, including NASA Mars rover 'Perseverance'.
- 5th Session Processed wind tunnel data using custom MATLAB script. Ran simulations and debugged coupled solvers code for VTOL stability.

Education

Purdue University, West Lafayette, IN
BS in Aeronautical and Astronautical Engineering

Aug 2016 – May 2021

Skills and Certifications

CAD/FEA (1800)	Siemens NX (800), SolidWorks (400), FEMAP (200), CATIA (150)
Programming (1250)	MATLAB (800), Python (300), C (150)
Certifications	Drone Pilot (Part 107), MIG Welding, CNC Machining
Interests	Electric Aviation, Aircraft Design, Drones, Chess, Hiking