Matthew Robinaugh

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Aug 18 – Dec 21: Student, Embry-Riddle Aeronautical University – Aerospace Engineering major with a concentration in Astronautics at Embry-Riddle Aeronautical University Prescott, AZ campus. Participated in a variety of extracurricular activities such as Formula SAE and intramural volleyball.

- Current GPA: 4.0/4.0
- Software skills: Catia v.5, MATLAB, Simulink, SolidWorks, Ansys, Linux, Git, Python, C++, Java, and OOP
- Mechanical Skills: CNC, 3D Printer, Oscilloscope, Basic Hand and Power Tools, and Lab Environment Safety
- Certifications: CATIA v.5 Mechanical Designer Specialist and Mechanical Surface Designer Specialist

May 21 – Aug 21: Systems Engineering Intern, Honeywell Aerospace – Worked with a 3-person team to integrate Honeywell's Next Generation Avionics system on a general aviation aircraft.

- Collaborated on the production of a Statement of Work and an Installation Engineering Bulletin
- Conducted IO analysis on the aircraft's avionics system through inspecting of installation and wiring manuals
- Automated electrical interface table transfer with python for file manipulation

Jan 21 – Present: Structures Lead, Propulsive Landing Senior Design Project – Coordinated the design and construction of the structures and mechanisms found on the landing vehicle. Worked with the controls team to develop a landing simulation and the control law for the propulsive landing.

- Designed the landing vehicle's full structure in a third of the semester allotted
- Produced the vehicle's structure for 50% of the estimated cost

Sept 20 – Aug 21: Flight Team Lead, Honeywell/ERAU UAM Research Project – Led a 5-person team to organize and execute flight and power tests to characterize flight performance. Repaired and troubleshot issues on the UAM with two teammates.

- Produced a fully autonomous capable UAM model
- Executed 3 successful autonomous flights
- Collected data was presented at the National Conference on Undergraduate Research

Jan 21 – May 21: Spacecraft Attitude Modeling Research Project, Embry-Riddle Aeronautical University – Designed and built a one-dimensional model of a satellite. Developed a control law utilizing Simulink and a reaction wheel to allow for pointing.

- Received $1000 in funding from the Arizona Space Grant for a research grant proposal
- Presented at the Arizona Space Grant Symposium for a panel of professors

Jan 20 – Dec 20: CATIA Teacher's Assistant, Embry-Riddle Aeronautical University – Instructed students on a 1:1 basis to provide in-depth instruction and assistance with troubleshooting issues.

- Tutored with 10-20 students each week to a pass rate of greater than 95%
- Completed 2 specialist certifications for CATIA v.5

Sept 19 – Apr 20: Engine Team Lead, Formula SAE Team – Oversaw troubleshooting, repair, and tuning of the team's engine. Began the development of an intake and exhaust manifold for our forced induction system.

- Diagnosed a major ECU malfunction and led the process of finding a replacement unit
- Increased membership retention by over 400%

Sept 19 – Mar 20: Collection and Transportation Team Lead, NASA's BIG Ideas Challenge – Responsible for leading the design of a lunar rover's structure and mechanisms, guiding meetings, and recruitment.

- Established a system to keep track of weekly deliverables
- Produced functioning CAD model of the rover in half of the competition time
- Received $2000 in funding from the Embry-Riddle Aeronautical University Undergraduate Research Institute

Mar 18 – Jul 18: Study Abroad in Japan – Attended school at a public high school in Japan. Lived with a host family to learn and adapt to a new culture and language.

- Obtained N4 level certification from the Japanese Language Proficiency Test