

Bradley Heim

Glen Ellyn, IL 60137 | 331-551-1156 | heimbr@purdue.edu | bradleyheim.github.io/portfolio/

EDUCATION

Purdue University

B.S. in Aeronautical & Astronautical Engineering, College of Engineering
B.S. in Integrated Business and Engineering, Mitch Daniels School of Business
Concentrations: **Data Analytics** and **Leadership via Larsen Leaders Academy**

West Lafayette, IN

May 2027

3.72/4.0 GPA

Relevant Coursework: Fluid Dynamics, Thermodynamics, Structural Analysis, Mechanics of Materials, Partial Differential Equations, Graphical Communication & Spatial Analysis, Signals Analysis, Introduction to Aerospace Design, Probability & Statistics in Engineering

Study Abroad: Barcelona, Spain (Summer 2025) - Collaborated with the CEO of Spanish startup Two.Zero to develop a growth strategy, applied organizational behavior and cross-cultural management principles to deliver actionable business recommendations

TECHNICAL EXPERIENCE

Medical Instrumentation in Space

West Lafayette, IN

August 2025 – Present

Project Lead

- Lead a multidisciplinary team to design a peristaltic infusion pump enabling blood transfusion in microgravity, integrating fluid mechanics, mechanical design, and electronics for safe operation in space
- Oversee systems engineering, requirements definition, and project timeline management, coordinating testing and documentation to ensure reliability under spaceflight constraints

Purdue Space Program - Satellites

West Lafayette, IN

August 2024 – Present

Structures, Mechanisms and Thermals

- Contributed to collegiate team building a 3U satellite bus, adherent to California Polytechnic standards, to provide satellite as a service capable of supporting payloads for commercial, academic, and governmental partners, recently going through SDR
- Developed and refined CAD and CAM of assembly to begin manufacturing a prototype assembly for extensive testing
- Performed analysis on CubeSat to mitigate thermal and environmental damage while ensuring components function

AAE 251 Aircraft Design Competition

West Lafayette, IN

January - May 2025

1st place team

- Designed an unmanned tanker aircraft capable of delivering fire retardant for wildfire mitigation, performing aerodynamic sizing, propulsion selection, and mission performance analysis in MATLAB
- Awarded 1st Place in the aircraft design category, nominated by Purdue faculty and selected by Northrop Grumman engineers and Purdue alumni as the top design among all class projects

Design For Good Hackathon sponsored by Dormakaba

West Lafayette, IN

October 2024

1st place team

- Won multidisciplinary innovation design competition with 120 IBE students and 20 Industrial Design students across 14 teams
- Undertook industrial design process to ideate and prototype an access solution for individuals with disabilities

Purdue Lunabotics

West Lafayette, IN

August 2023 – May 2024

Systems Team

- Served within the systems team submitting deliverables and preparing documents and templates to manage requirements and ensure standardization throughout sub teams while following systems engineering practices required by competition
- Placed 2nd in presentation and design, placed 3rd in systems engineering paper against 58 collegiate teams

LEADERSHIP EXPERIENCE

Zeta Beta Tau Alpha Alpha Chapter

West Lafayette, IN

July 2025 – Present

Housing Manager

- Oversee facility management for 80 residents, with an annual budget of \$8000 ensuring proper maintenance and regular cleanings
- Planned and executed 7 member-led projects across 60 participants, managing a \$1,500 budget and delegating responsibilities to deliver results efficiently and within financial constraints

Operations Director

November 2024 – June 2025

- Directed operations for a 180-member chapter, ensuring full compliance with Purdue FSCL and ZBT International requirements while mentoring chairmen in academics, judicial processes, and chapter performance to improve efficiency and chapter GPA.
- Designed and implemented a comprehensive database system to efficiently track and analyze member participation and standards across 12 parameters, enhancing data accessibility, accountability, and executive decision-making.

JOB EXPERIENCE

Purdue Football Student Video Manager

March 2024 – Present

CU1 Amphitheatre Concert Security - Roamer

June 2024 – August 2025

RELEVANT SKILLS

NX (80 hours), Fusion, Python, Matlab, Java, R, Autodesk and Microsoft Office, CAM, Aras Innovator, Jira, Confluence