GRANT FELLOWS

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EDUCATION

Bachelor of Science in Mechanical Engineering Expected graduation May 2027
Purdue University, West Lafayatte, Indiana

SKILLS

Software Development	Python, Java, JavaScript, MATLAB; Flask, HTML, CSS; Data processing & modeling with NumPy, Pandas, SymPy, Matplotlib
3D Modelling & Simulation	Siemens NX, Autodesk Inventor, Fusion 360 (CAD/CAM/FEA), Simcenter/FEMAP (FEA)
Fabrication	Manual mill/lathe; CNC mill (ShopBot PRSalpha, Tormach 1100M); 3D printing, laser cutting

EXPERIENCE

OrbShip Fellow, Orb Aerospace May 2025 - Aug 2025
Grand Rapids, Michigan

- Developed a Python library and webapp for improving the simulation of additive manufactured (AM) parts, allowing Orb engineers to better understand the stiffness and failure properties of printed parts before real-world testing
- Wrote extensive documentation and presented to Orb team on the use of this approach for simulating 3D prints
- Conducted 50+ ASTM tensile tests and data analysis to demonstrate validity of simulation approach in real-world parts

Systems Engineering Lead, Purdue Lunabotics Aug 2024 - May 2025
West Lafayette, Indiana

- Created and edited technical descriptions of robot processes, tracked and verified robot and system requirements
- Onboarded and managed new members
- Awarded 3rd place in Systems Engineering, 2nd place in Presentation and Demonstration, and 4th place overall out of 58 teams for 23-24 season.

Laser-Assisted Processing Researcher Aug 2023 - May 2024
West Lafayette, Indiana

- Researched applications of laser-assisted processing to industrial decarbonization for Dr. Benxin Wu's Vertically Integrated Projects team
- Synthesized findings from over one hundred papers into a report and final presentation to inform further research by the lab

FTC Robotics Captain, Eastside Preparatory School Aug 2019 - May 2023
Kirkland, Washington

- Captained First Tech Challenge robotics team 8103 (Null) for 2021-2022 season. Lead hardware team for 2022-2023 season
- Designed, prototyped, and fabricated mechanisms for 4 years of game challenges and robots

PROJECTS

See gwfellows.github.io/portfolio for a portfolio of my personal engineering projects, including

A GPS mount for a ship rails. Built for a captain's custom use case; parts are in active use today.
An ergonomic electric guitar body built from 3 laser-cut aluminum plates
A Python library for tree-based genetic programming, used to perform symbolic regression on datasets