Alan Munschy

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EDUCATION

Cornell University   **August 2023 – May 2027**
Bachelor of Engineering, Mechanical Engineering   *Ithaca, NY*
- GPA: 4.0/4.0
- Relevant Coursework: Dynamics, Mechanical Design, Thermodynamics, Statics, Differential Equations, Linear Algebra, Programming with Python, Object Oriented Programming & Data Structures

EXPERIENCE

Crane ChemPharma & Energy   **May 2025 – Aug 2025**
Design Engineering Intern   *Spartanburg, SC*
- Modeled **15 assembly sockets** for Gyrolok tube fittings and created prints for manufacturing.
- Designed and machined a **layered no-go gauge** to separate ferrule sizes on the machine floor.
- Created a Power BI **dashboard** to track completion KPIs for EPDM engineering workflows.
- Trained a **regression model** on historical BOM data to predict materials needed for new tube fittings.

Cornell University Autonomous Drone   **Sep 2024 – Present**
Mechanical Team Member   *Ithaca, NY*
- Designed and assembled a **drone to carry small payloads**, planning around requirements from electrical team.
- Programmed CNC toolpaths and **machined carbon fiber** drone parts using Fusion.
- **Simulated drone airfoil** model in RealFlight Evolution to test max speeds.

Bio-inspired Fluid Lab   **Aug 2025 – Present**
Undergraduate Researcher   *Ithaca, NY*
- Designed, 3D printed parts, and assembled a **hexapod robot with 2 DOF legs** (12 motors).
- Wired electrical components and configured Arduino code to achieve **full planar movement**.
- Created a **ROS** Launch file to simulate the hexapod walking in **Gazebo**.

Cornell Bowers Course Staff   **Aug 2024 – Present**
Teaching Assistant (CS 1110 - Intro to Programming with Python)   *Ithaca, NY*
- Manage a **40-student lab** section with python exercises twice a week.
- Hold consulting hours twice a week for programming assignments and questions.
- Coordinate in a team of other consultants and assistants to plan class sections.

PROJECTS

For the following hackathons, I was the primary front-end engineer (React & Javascript/Typescript)
BigRedHacks Hackathon (Cornell)   **September 2025**
- Design track winner; Web game that lets you drive a car from computer vision detecting palm location.

BigRedHacks Hackathon (Cornell)   **September 2024**
- 2nd place overall; Mobile app that generates music based on user selected mood.

RCareWorld Hackathon (Cornell)   **April 2024**
- 1st place overall; Mobile app that helps patients with Alzheimer's record and replay memories.

SKILLS & TECHNOLOGIES

- **Skills:** CAD, 3D Modeling, Optimization, Web Development, Simulations, Finite Element Analysis
- **Technologies:** SolidWorks, Fusion, Onshape, Ansys, MATLAB, Python, Java, TypeScript, SQL, JDE, EPDM