Brian Hou

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Education

Purdue University	Junior, 2024 – 2026
BS in Robotics Engineering Technology	GPA: 3.4
Arizona State University (Transferred)	2022 – 2023
BSE in Robotics Engineering	Dean's List: 2022–2024, GPA: 3.99

Work Experience

Mechanical Engineering Co-op (2024 Fall)   Aug 2024 - Present
GE Appliances, a Haier Company
- Assisted with the New Product Introduction for Recreational Living, focusing on innovative design solutions
- Developed Air Conditioning CAN Bus Control Logic, improving system efficiency and integration
- Engaged in software development using NI LabVIEW and Omni Scope to streamline testing processes and enhance data analysis
- Designed Air Flow Chamber using Solidworks achieving cost savings of $30,000+ through optimized design

Robot Design Engineer Internship (2023 Summer)   May 2023 – August 2023
3H. Grand Enterprise
- Designed and developed 3D models for a delivery robot, including project planning and Rapid prototyping
- Led company-wide IT support, ensuring optimal software and hardware performance through troubleshooting and system improvements

Project Experience

Mechanical Design Engineer   May 2023 – Present
Purdue ACM SIGBots
- Awarded 2024 World Champions, Design Award, and Community Award for exceptional innovation and teamwork in robotics
- Created detailed 3D CAD designs using Autodesk Inventor and Solidworks
- Spearheaded robot design and construction, prioritizing precision, innovation, and operational efficiency as mechanical lead

Project Lead & Mechanical Lead   May 2022 – April 2024
PYRO Robotics
- Project Lead and Mechanical Lead for Rossum Rumblers and PYRO Robotics teams
- Developed 3D designs for complex mechanisms, such as PTO drivetrain, using Solidworks
- Led all aspects of robot design, construction, testing, and troubleshooting to ensure functionality and performance

Personal Projects   Jan 2019– Present
- *Custom 5-inch FPV Drone:* Designed and built for acrobatics and cinematic photography, including PID tuning for optimal performance
- *6-Key Custom Keypad:* Engineered using Solidworks and Arduino Pro Micro, with a custom PCB for seamless functionality
- *Go-Kart Project:* Developed as a high school IB personal project, showcasing mechanical and design skills

Skills

- *3d CAD Software:* Solidworks, Creo, Autodesk Inventor, 3D Printing
- *Mechanical Skills:* Machining (manual lathe & mill) and various hand tools
- *Programming languages:* C/C++, Java, Python, HTML & CSS, JS
- *Industrial Control and Automation:* PLC, Industrial Controls, Industry 4.0, Logic Controllers, CAN Bus,

Certifications

- Solidworks CSWA-Mechanical Design   Dec 2023