

JOSEPH RUAN

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EDUCATION

Purdue University

Bachelor of Science - Mechanical Engineering

West Lafayette, IN

Aug. 2024 – May 2027

EXPERIENCE

Purdue Electric Racing

Student Designer

West Lafayette, IN

Aug. 2024 – Present

- Designed chassis closeouts using NX to isolate cockpit and driver from potentially hazardous road debris
- Validated closeouts using ANSYS to match specified rigidity targets as well as for aerodynamic purposes

RISE Lab

Research Assistant

West Lafayette, IN

Aug. 2024 – Present

- Developed low-cost inertia measuring and position estimation solutions to study animal behavior patterns
- Designed soft robotic limbs to assist in locomotion when traversing difficult terrain

Global Active Problem Solving (GAPS)

Camera Designer

West Lafayette, IN

Aug. 2024 – Present

- Collaborated with Universidad del Norte to monitor the ecosystem around the university
- Worked on a low-cost wildlife camera solution utilizing bird feeders to hide a custom solution to prevent theft

Miso Mechanics 9442

Captain & Lead Programmer

Seattle, WA

Aug. 2023 – May 2024

- Founded rookie FIRST Robotics team and fundraised over \$30K for competition and robot costs
- Designed multiple subsystems on award-winning competition robot, ranking 20th offensively out of 3,500 teams
- Developed computer vision system using PhotonVision to detect game objectives and utilized it in autonomous routines, allowing for real-time decision making to aid in gameplay

Troop 647

Eagle Scout & Patrol Leader

Mercer Island, WA

June 2018 – June 2024

- Planned and led a major construction project to remodel charter organization's property
- Organized bi-weekly outings and service projects for patrol members
- Assisted in planning and leading Troop camping trips and conservation projects

Yifang Fruit Tea

Cashier & Cook

Bellevue, WA

June 2022 – Oct. 2023

- Developed skills in customer service through 250+ daily sales and \$25,000+ in monthly revenue
- Demonstrated Chinese proficiency using a nonnative language to execute necessary day-to-day operations

PROJECTS

Wildlife Camera | Onshape, Unix

Aug. 2024 – Present

- Designed easily manufactured wildlife cameras using "bird feeder" housings to prevent theft
- Set up an on-site in-house storage solution to fulfill video and data storage needs

Streaming Service | Caddy, Cloudflare Tunnels, DNS, Docker, Unix

June 2023 – Present

- Utilized various public Docker containers to build a streaming service used by 50K active users
- Implemented user SSO with AniList and Trakt APIs to automatically synchronize user data to service
- Employed reverse proxy and various web technologies to maintain service stability and load-balance

TECHNICAL SKILLS

CAD: Onshape, Solidworks, NX, ANSYS

Computer Languages: Java, Python, C, HTML, CSS, Bash,

Developer Tools: Git, Docker, Google Cloud Platform, Microsoft Azure, Amazon Web Services

Languages: English (Native), Chinese (Advanced)