Jaia Foster

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Driven student seeking a career for 2024 to develop industry expertise and make meaningful contributions to project teams, passionate about sustainable energy, robotics, and teamwork.

Education

Rensselaer Polytechnic Institute, Troy, NY | Expected Graduation May 2024 | B.S. Mechanical Engineering

Experience

Systems Engineering Intern, Kraus Motor Company — St. George, UT; Aug 2022 – Feb 2023

- Created information transfer systems between collogues to **increase design cycle productivity by 20%**
- Managed and optimized inventory data and storage conventions for **over 2000 parts and assemblies**.
- **Led implementation of manufacturing software** company-wide, worked closely with CEO and vendors.

Construction Contractor — Pasadena, CA; Jun 2021 – Aug 2021

- **Managed a team of 4** in quoting, scheduling, and construction projects
- **Handled a $25k budget** for purchasing, payroll, and equipment rental. **Grossed $7k in under 2 months**.
- Conducted client, consultant, and merchant meetings, ensuring on-time, on-budget project delivery.

Mechanical Lead, Ellipse Robotics Team — Santa Rosa, CA; Sep 2017 – May 2020

- **Founded and managed a team of 12** in designing and **constructing 3 world championship qualifying robots**, including custom gearboxes, compliant mechanisms, pneumatics, PID control, and path following.
- Designed with SolidWorks, Fusion 360, and Onshape to then CNC machine and assemble robot parts.

Front of House, The Whistling Kettle and Sunhee's Kitchen — Troy, NY; Jun 2023 – Present

- Managed a 40 hour/week position at WK concurrently with a 25 hour/week position at Sunhees, exhibiting time management skills and the ability to work in high stress, team centered environments efficiently.

Coursework

Robotics I

- Studied in a project team of 5 to design and analyze a kinetic and dynamic robotic system for stacking blocks.
- Path following, control, Fwd and Inv Kinematics, PID, and sensing utilizing Python and Matlab.

Multidisciplinary Capstone Design

- Worked in a team of 5 to redesign, prototype, and present a dated complex electromechanical system.
- Designed in CAD (NX) with subversion file management and practiced accurate and frequent documentation.

Control Systems Lab

- Sensing, simulation, programming, and control in a lab environment. PID, modeling and analysis of collected data, algorithm development and implementation in hardware.
- Nonlinear effects of discretization, delays, saturation, and sampling. MATLAB, Simulink, SISOTOOL.

Introduction to Engineering Design

- Led a team of 4 in designing and prototyping 3 projects including the HydroCap: an ultrasonic volume sensing, omni-compatible water bottle cap with companion app and external data processing.

Proficiencies

Solid Modeling: Siemens NX, Fusion 360, Solidworks.
Lab: CNC Machining, Excel, MATLAB, SISOTOOL
Technologies: MS Office, Converge CFD, LTsplice.
Programming: Python, MATLAB, Simulink.