Janna Gilleman

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EDUCATION

Smith College, Northampton MA
September 2020 - May 2024
- BS in Engineering Science, Focus in Electromechanical Engineering | GPA 3.83/4.0 | EIT Certified

EXPERIENCE

Cofab Design, Holyoke MA—Engineering Intern
June 2023 - September 2024
- Designed, modeled, and tested biomedical and consumer devices for this engineering consulting firm.
- Created programmable, autonomous glue deposition machine from an old, broken 3D printer.
    - Troubleshot embedded system's motherboard and EFD driver, documented process.
    - Increased product throughput 38%, reduced man-hours 96%, enabled easy task cross training.
- Planned and executed Instron strength experiment for informed design of electronic pinch valves.
    - Performed data collection/analysis, as well as experiment writeup and presentations to client.
- Designed swage fixture for pick and place factory's circuit board layout.

Honda-Sponsored Yearlong Capstone —Systems & Robotics Engineer; Q2 Project Manager
September 2023 - May 2024
- Collaborated with my team of four to design a mobile, autonomous charging robot for electric vehicles.
- Led design reviews, arranged out-of-state site visit + meetings, taught team members new technical skills.
- Acted as the main point of contact with Honda management, effectively communicated team needs.
- Electrical/mechanical/software troubleshooting of 6 axis research-grade large robotic arm.
- Implemented ROS, RVIZ, & Gazebo, calibrated embedded camera for object detection.
- Scripted a Python system analysis program which allowed for ROI calculations and resource optimization.

Werfen Polymer Injection Lab, Smith College—Software and Embedded Hardware Engineer
June 2023 - August 2023
- Created real-time AI computer vision system; precisely fills blood diagnostic sensor cards with resin.
- Designed the electronic, microcontroller-based system, developed the firmware, established serial communication with smart pump, and tested/calibrated the device for deployment in research facility.
- Co-programmed the AI scripts using OpenCV, as well as modeled and 3D printed the mechanical fixture.
- Increased card success rate from 25% to 75% compared to the original human-operated system.
- Wrote report and technical documentation of the device for non-technically oriented users.

Handy Humans, Easthampton MA — Carpenter
June 2022 - December 2022
- Traveled to client houses building shelves, insulating, laying flooring and gravel, all weather conditions.
- Worked with clients to address their needs while staying within their budget and time allotment.
- Considered a "skilled laborer" due to proficiency working with my hands and problem solving.

Jarvis Surgical, Westfield MA—Engineering and Manufacturing Intern
2019, 2020 Summers
- Edited engineering drawings of knee, ankle, and shoulder surgical implants in SIEMENS NX.
- Manufactured high precision surgical implants using multiple machines (Tormach Mill, Sand Blaster, Coordinate Measuring Machine, Laser Engraver).

SKILLS

ELECTRONICS: Benchtop Equip | Arduino, Rasp Pi, Mbed | Matlab, Simulink, RStudio | ROS2, Gazebo | LTSpice
COMP SCI: Python, C/C++, R, Java, Javascript, Assembly, G-code | VS Code, Github | HTML, CSS | Linux/Unix Shell
CAD: Professionally proficient with Fusion360 and Blender | Solidworks, AutoCAD, Siemens Nx | GD&T
PROTOTYPING: 3D printing, CNC milling, soldering, laser cutting, blacksmithing, welding, power tools

Awards

2024 Dean's List "top 25% of the student body"
Nancy Hellman Prize for "making extraordinary contributions to the advancement of women in engineering"