Janna Gilleman

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EDUCATION

Smith College, Northampton MA
September 2020 - May 2024 (expected)

- BS in Engineering Science, Focus in Mechatronics Engineering, GPA 3.81/4.0
- Spring 2023 semester abroad at DIS Stockholm in Sweden (Sustainable Engineering)

SKILLS

COMP SCI: Code {C, C++, R, Python, Java, Javascript, Assembly} | Logic Design | Web Dev | Vscode, Github
ELECTRONICS: Benchtop Equip | Arduino, Rasp Pi, Mbed | Matlab, Simulink, RStudio | Lighting & Audio Design
PROTOTYPING: 3D printing, CNC milling, soldering, laser cutting, foam core, blacksmithing, carpentry, power tools
CAD: Professionally proficient with Fusion360 and Blender | AutoDesk, Siemens Nx
MISC: Microsoft Suite | Adobe Creative Suite {Lightroom, After Effects, Photoshop, Animate, Illustrator, InDesign}

EXPERIENCE

Honda AI Electric Vehicle Charging Robot—Systems & Robotics Engineer; Q2 Project Manager
September 2023 - May 2024 (ongoing)

- Honda sponsored, year-long capstone project designing mobile, autonomous charging robot for EVs.
- Designing and building physical prototype of the AI plug guidance system from the ground up.
- Responsible for all CAD, electronics, and programming AI scripts using YOLOv7, TensorFlow, PyTorch, ROS.
- Led design reviews, arranged out-of-state site visit + meetings, taught team members new technical skills.
- Analysis of stakeholder needs, creation of design requirements, project scope, and concept tradeoffs.
- Acted as the main point of contact with Honda management, effectively communicated team needs.

Werfen Polymer Injection Lab, Smith College—Software and Hardware Engineer
June 2023 - August 2023

- Created real-time AI computer vision system; precisely fills blood diagnostic sensor cards with resin liquid.
- Designed and built the microelectronics system using Rasp Pi and I/O port connection with smart pump.
- Modeled and 3D printed the mechanical fixture and co-programmed the AI scripts using OpenCV.
- Increased card success rate from 25% to 75% compared to the original human-operated system.
- Created comprehensive technical documentation of system and code for non-technically oriented users.

Tiny Foundations, Essex CT—Concept Designer and CAD artist
June 2022 - December 2022

- Learned federal regulations for tiny houses; independently conceptualized two purchasable tiny houses.
- Designed a sustainable community based on consumer demographics (energy, waste, and water systems).
- Rendered interior models of stock houses in Blender and was hired again in the fall to continue this work.
- Displayed the rendered models on Tiny Foundations' website to attract more customers for full builds.

Handy Humans, Easthampton MA — Carpenter
June 2022 - December 2022

- Traveled to client houses building cabinets, converting vans, insulating, installing flooring, lights, etc.

Sustainable Materials Lab, Smith College—Researcher
June 2021 - February 2022

- Fabricated and tested tensile strength of a new, sustainable flax composite material using Instron machine.
- Designed and built a custom, sustainable vacuum infusion rig and 3D printed clamping fixtures that allowed for the standardization of the tabbing process, drastically increasing the amount of viable collectable data for the study of how flax composite tab size affected tensile strength.

Jarvis Surgical, Westfield MA—Engineering and Manufacturing Intern
2019, 2020 Summers

- Made edits to surgical implant blueprints (OP-sheets) for the engineering team in SIEMENS NX.
- Trusted with the manufacturing of high precision surgical knee, ankle, and shoulder implants using multiple machines (Tormach Mill, Sand Blaster, Coordinate Measuring Machine, Laser Engraver).