

Work

Perceptive Systems Software Engineer 2019-2021

Designed and built initial software and compute systems for early-stage autonomy sensor hardware startup (employee #6). Helped build the software team and set best practices + norms.

Owned multiple cross-functional systems engineering projects simultaneously:

- Built the entire sensor driver system with Robot Operating System (ROS), enabling real-time high bandwidth (> 20 Gb/s) multi-modal data capture, processing, and visualization.
- Designed and built sensor fusion systems leveraging off-the-shelf machine learning models – processing data in 3D from multiple cameras, lidar, radar, IMU – to enable key product features.
- Designed a robust compute platform to meet real time sensor system demands for I/O and processing capability within tight time, cost, size, and power constraints.

Apple Sensor Hardware Integration Engineer 2016-2019

Coordinated teams including software, algorithms, sensor module, and manufacturing to drive the build, design verification, characterization, and integration of next-generation depth sensor systems for autonomous systems.

- Built relationships and organizational knowledge to effectively coordinate efforts across many teams with different knowledge centers and competing requirements.
- Designed and commissioned (in-factory) sensor calibration stations on cross-functional teams. Proved out and implemented novel techniques, delivering high precision and repeatability.
- Triage and debugged sensor system failures and contributed to development of the systemwide fault reporting and management strategy.
- Wrote widely-used software tools automating common sensor interface operations.
- Designed circuit boards for sensor support systems.

Teaching and Study

Ethics in Technology Seminar Teaching Team Member 2022-2023

Designed and lead seminar/discussion series for the Olin community. Facilitated group Q&A with speakers from industry and academia. Threads of inquiry included critiquing the narrative of inevitability in technological development, the ethic and values inherent in designed artifacts, whether self-regulation by industry is possible (or desirable), and how to approach ethical concerns that arise in the workplace while staying true to your values.

Education

Olin College B.S. in Electrical and Computer Engineering 2016

Capstone Conducted market research and product concept + design for Ivani, an IoT startup.
Patent: **US10072942B2 Electrical monitoring and network enabled electrical faceplate**

Skills and Experience

- Python, C, C++, Robot Operating System (ROS)
- ML, GPU programming (CUDA)
- Computer vision (OpenCV)
- 3D printed parts design and printer operation
- Full-stack web (Flask, SQL, HTML, CSS, JS)
- NVIDIA Jetson, NVIDIA DRIVE
- Linux sockets, TCP/IP, 10GBASE-T Ethernet
- PCB schematic capture and layout (Cadence)