

Senri Nakamura

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SKILLS

Languages: IEC 6113-3, C, C++, Python, VHDL, SystemVerilog, JavaScript

Software: TIA Portal, TwinCAT, WinCC, Ignition, CODESYS, Node-RED, Docker, Grafana, Industrial Edge Hub

Protocol: Modbus RTU/TCP, EtherNet/IP, EtherCAT, CAN, PROFIBUS, OPC UA, MQTT

EDUCATION

Tufts University

B.S. Electrical Engineering, GPA:3.5/4.0

Medford, MA

Sept 2022 - May 2026

Coursework: Embedded Systems, Digital Logic, Electronics I & II, Machine Learning, CMOS design, EM Fields & Waves

WORK EXPERIENCE

Emvolon, Inc.

Electrical Engineering Intern

Woburn, MA

Jan 2026 - Present

- Designing Beckhoff PLC control systems and HMIs using CAN, Modbus RTU, Ethernet, and EtherCAT.

Interstellar Technologies Inc.

Automation Engineer Intern

Tokyo, JPN

June 2025 - Aug 2025

- Programmed Siemens ET200SP PLCs (TIA Portal v18/STEP7), implementing Modbus RTU/TCP and P2P.
- Developed CRC32-ISO-HDLC validation logic and NTP-based time sync.
- Configured SCADA/HMI systems and Grafana dashboards, enabling real-time monitoring.

Avionics Engineer Intern

June 2025- Aug 2025

- Developed FPGA IP on Xilinx Zynq-7000 with UART/RS-232/422/485 interfaces for 10+ subsystems.
- Configured multi-board interface with M12/M16 connectors for 2 engine integration tests.

Eco-Pork Inc.

Data (Contract)

Tokyo, JPN

May 2025 - July 2025

- Validated structured and unstructured data to ensure reliability in automation, ML, and AI workflows.

Recruit Holdings Co., Ltd.

Product Manager Intern

Tokyo, JPN

July 2024 - Aug 2024

- Led product development via 100+ customer interviews, defined a \$1B TAM / \$100M SOM and secured executive buy-in.

Nano Lab - Tufts University

Undergraduate Research Assistant

Medford, MA

Apr 2023 - Sep 2023

- Examined triboelectric nanogenerators and pressure sensors in the gastrointestinal (GI) tract via an ingestible pill.

PROJECT EXPERIENCE

PLC Log Intelligence Platform (Siemens Kicks for Edge Hackathon - Global Finalist)

- Built an analytics system on SIMATIC IPC BX-39A using Node-RED and OpenSearch to ingest, decompress, and parse 1M+ PLC/MFC logs into structured JSON and real-time dashboards, reducing analysis time from 7+ days to less than 10 minutes.

Tufts Solar Vehicle Project (TSVP)

- Led production of 33 solar arrays with 95% alignment and 75% power performance via in-house EL testing and lamination tool.

Ultra-Low-Power CMOS OTA for Capacitive-Touch Sensing in Wearable Interfaces

- Designed in XFAB 180nm achieving 57 dB gain, ~20 MHz GBW, and 180µW.

Pulse Oximeter with Feedback Control

- Developed a pulse oximeter with MOSFET LED control and band-pass filters for accurate SpO₂ readings.

LEADERSHIP EXPERIENCE

Tufts Solar Vehicle Project (TSVP)

President

Medford, MA

Aug 2024 - Aug 2025

- Grew the team by 1000% (120 members), created the first managerial system for 3 subteams, 15+ subgroups, and 12 leads.
- Managed \$200K budget, raised \$100K additional funding, 45+ sponsors, and secured 3 dedicated workspaces (first of 400+ orgs).

Electrical Co-Lead, Founding Member (1 of 6)

Sep 2023 - Jul 2024

- Supervised a 4-person team, coordinating cross-team integration to align design and system testing.