

WORK EXPERIENCE



HAPIKO, BROOKLYN, NY

Senior Embedded Software Engineer

July 2025 – Present

First hire and sole firmware engineer for Stickerbox, a voice-first AI creativity device; transformed Arduino prototype firmware into a production ESP-IDF/FreeRTOS platform supporting tens of thousands of units before a publicly reported acquisition agreement valued at up to \$50M.

- Own the embedded stack across device state, Wi-Fi/BLE onboarding, Phoenix/WebSocket communication, audio capture, display and thermal-printer control, resilient OTA, CI/release systems, and factory tooling.
- Led secure firmware and factory provisioning across three hardware generations, including signed/encrypted builds, eFuse controls, irreversible configuration safeguards, release gates, and backward-compatible OTA for deployed devices.
- Lead embedded-systems work for next-generation hardware across EE/ME design review, architecture, board rework, CAD/prototyping, factory integration, and production reliability with multiple manufacturing partners.



NEUMA, NEW YORK, NY

Founding Hardware Engineer

July 2024 – July 2025

First hire and sole full-time device owner; delivered three neural-interface wearable prototypes in eight months across FreeRTOS firmware, EMG/ultrasound/IMU sensing, electronics, mechanics, wireless transport, and host data-collection tooling.

- Worked with neuroscience and ML engineers on multimodal biosignal systems, contributed to the design and debugging of Python data-collection and visualization tooling, and delivered investor demonstrations that helped close a multimillion-dollar funding round.
- Diagnosed intermittent EMG signal loss by instrumenting sample continuity, correlating the failure with cable motion, tracing it to enclosure-induced reference grounding, and validating the electrical-isolation fix.



IMAGE ENGINEERING, BALTIMORE, MD

Embedded Electronics Engineer

April 2024 – July 2024

Brought up and field-tested a networked multi-board STM32 pyrotechnics control system used at Universal Studios Florida, using Modbus/TCP, UART, and I²C across firmware, diagnostics, sensing, and electromechanical actuation.



TOMORROW LAB, NEW YORK, NY

Electrical Design Engineer

June 2021 – April 2024

Built consumer electronics, connected devices, and electromechanical products for clients including Nerf, IMAX, Citizen, Richialist, Belay, MFTS, and DigiKey, with roughly equal emphasis on PCB design and embedded firmware, plus physical prototyping and mechanical integration.

- Designed and brought up PCBs and embedded firmware, then integrated them into production housings and mechanisms across power systems (battery, low-power, and DC/DC), sensing (load cells and magnetic sensing), actuation (motors and servos), user interfaces (LEDs and speakers), connectivity, and embedded-compute evaluation.

SUMMARY

Embedded systems engineer with 5+ years building connected, sensor-rich, and AI-enabled physical products from prototype through production. Firmware-centered across C/C++, RTOS architecture, connectivity, electronics, hardware/software debugging, manufacturing, and reliability, with experience integrating sensing, actuation, product behavior, and factory systems.

EDUCATION

NEW YORK UNIVERSITY

MPS, Interactive Telecommunications | 2021
GPA: 4.0

CITY UNIVERSITY OF HONG KONG

BSc, Creative Media Computing | 2018
Valedictorian

TECHNICAL SKILLS

Firmware and Software

C/C++ · Python · ESP-IDF · FreeRTOS · ESP32-S3 · STM32 · Linux · Git · CI/CD

Connectivity and Interfaces

Wi-Fi · BLE · TCP/IP · WebSockets · Phoenix Channels · Modbus/TCP · SPI · I²S · I²C · UART · JTAG

Electronics and Production

Schematic/PCB design · board bring-up · oscilloscope · logic analyzer · DMM · soldering/rework · secure OTA · factory tooling · manufacturing validation

Sensing and Product Integration

EMG · ultrasound · IMU · audio · motors/servos · Fusion 360 · FDM/mSLA printing · wearable and test-rig fabrication

SELECTED PROJECT

Cat.AI, edge-AI pet feeder

TOMORROW LAB PROJECT · FOR DIGIKEY WITH ANALOG DEVICES

Prepared a cat-versus-dog image dataset, trained and quantized a CNN using Analog Devices' MAX78000 SDK, deployed the model to the microcontroller, and integrated inference with PWM-controlled servo actuation.