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EDUCATION

Olin College of Engineering

Needham, Massachusetts

Bachelor of Science in Electrical and Computer Engineering

Expected May 2028

- GPA: 3.94/4.0
- Relevant Coursework: Data Structures and Algorithms, Machine Learning, Software Design

TECHNICAL SKILLS

Languages: Python, Swift, C/C++, JavaScript, SQL

Machine Learning & Data: PyTorch, Hugging Face, LeRobot, Gymnasium, ONNX, Pandas

Mobile & Web: SwiftUI, SwiftEmbeddings, Vectura, SQLite, React, Next.js, Tailwind CSS

Developer Tools: Git/GitHub, Linux, Docker, Apptainer, Isaac Lab/Sim

EXPERIENCE

Software Engineering Intern — EchoMinds

June 2026 – Present

Olin College Crowdsourcing and Machine Learning Lab (OCCAM Lab)

- Sole iOS developer on OCCAM Lab's assistive-technology project; built and shipped EchoMinds through TestFlight with VoiceOver support, enabling blind and visually impaired users to semantically search personal notes. The app is being tested by 15 users at the Carroll Center for the Blind as a lower-cost alternative to \$500 Victor Reader devices.
- Implemented local semantic retrieval in Swift and SwiftUI using SwiftEmbeddings and Vectura to generate, store, and query sentence embeddings for natural-language note discovery.
- Designed a synchronized persistence layer linking vector records with SQLite note metadata so creates, edits, and deletions remain consistent across both stores.

Data Science Intern

December 2025 – May 2026

Olin Power Electronics Lab

- Automated parsing, cleaning, and consolidation of MagNet .npy and HDF5 files with Python/Pandas, saving several hours of manual preparation for ongoing power-electronics research.
- Analyzed how frequency, duty cycle, and temperature affected magnetic flux density and power loss, producing plots used by the lab to guide ongoing core-loss modeling.

PROJECTS

Neural Networks for Robotic Laundry Folding | Python, PyTorch, Isaac Lab/Sim

March 2026 – May 2026

- Placed 28th of 235 international teams by fine-tuning and combining four robot-policy architectures: ACT, diffusion policy, SmolVLA, and Pi0-FAST.
- Built end-to-end training and evaluation pipelines in Isaac Lab/Sim on a Linux compute cluster, using Git for reproducible team runs.
- Trained the policies with Hugging Face Accelerate on a 4× NVIDIA A100 node, using gradient accumulation to work within GPU-memory constraints.

Sim-to-Real Inverted Pendulum | Python, PyTorch, ONNX, Raspberry Pi

March 2026 – Present

- Trained a Deep Q-Network in a custom Gymnasium environment and transferred it to a physical inverted pendulum that balances for 5–10 seconds under a 25 Hz control loop.
- Deployed the ONNX policy on a Raspberry Pi 3B+ with live I2C data from AS5600 encoders; debugged memory-pressure crashes and stabilized inference with SD-card-backed virtual memory.

AWARDS & HACKATHONS

- **CYVL AI Hackathon (2026)** — 3rd place (\$1,000) for RL navigation policies trained in a LiDAR-built digital twin of a Boston street.
- **BOW DataFest (2026)** — Best in Show for a neural network analyzing hospital readmission and lifestyle factors.
- **MakeNJIT Hardware Hackathon (2024)** — 2nd overall and Smart Cities & Sustainability winner (\$1,250) for SmartCan; only high-school team competing against undergraduates.