

# Aedin Lai

(978) 799-3296 | lai.ae@northeastern.edu | linkedin.com/in/aedin-lai | github.com/Aedin-ctrl

## EDUCATION

### Northeastern University — Boston, MA

*Expected May 2029*

Candidate for Bachelor of Science in Electrical & Computer Engineering

Coursework: Calculus 2, Physics 2, Chemistry, Cornerstone of Engineering 2, First-Year Writing

## EXPERIENCE

### Data Center Infrastructure Intern | SingleStore

*June – September 2026*

*Boston, MA*

- Led hardware deployment for a phased data center expansion, scaling a private cloud platform from 160 to 300+ VMs
- Redesigned a single-push rollout into an incremental “two racks at a time” strategy to cut disruption to live workloads
- Delivered capacity across three cohorts of 40–50 VMs, hitting or landing within one week of every target date
- Diagnosed a Linux kernel storage defect and a multi-week NFS instability, deploying fixes that restored full fleet capacity and system stability
- Supported a full Oakland-to-Boston data center relocation, migrating the platform from bare-metal to virtualized infrastructure

### Research Intern | PEACE Foundation, Yale University School of Medicine

*2023 – 2024*

*Supervisor: Dr. Kun Liu, Associate Professor of Sports Neuroscience*

- Designed, built, and improved a full-body balance measurement device to study cognition and movement in neurological patients
- Automated data collection using custom hardware across ASD, Alzheimer’s, Parkinson’s, and schizophrenia patient populations
- **Presented findings at ISEC 2024** and co-authored results accepted for publication in **JAMA** (2025)
- Co-developed a Yale study assessing stressors and emotional health in Division I, III, and club collegiate fencing athletes

## PROJECTS

### One-Inch Punch Arcade Machine | Lead Constructor & Designer

*Fall 2025*

*Northeastern University, GE1501*

- Worked hands-on for the whole build: mechanical construction, electronics, and scoring software — from concept to expo launch
- Designed a “one-inch punch” mechanism using dual laser sensors, and wrote the scoring logic converting swing velocity into a live score
- Built the wooden frame, pendulum-and-magnet reset system, and laser-cut acrylic paneling entirely from scratch
- Validated durability through 80+ personal stress-test swings, catching and fixing structural wobble before launch
- Built a layered-sponge padding system that safely absorbed harder hits than originally scoped
- Identified a paddle material limit from full-force hits during a full expo day of play and proposed a rubber-composite redesign

### Cal Tracker | Self-Hosted Calorie Tracker

*Python, HTML/CSS, Raspberry Pi*

- Built and self-hosted a real-time calorie tracking web app on a Raspberry Pi with a lightweight front-end/back-end and persistent local storage

### Hallway Marathon Event Site

*hallway-marathon.github.io*

- Designed and built an event website from scratch (HTML, CSS, JavaScript, no frameworks) with live betting odds and competitor stats for a multi-university competition
- Independently managed all content, deployment, and live updates throughout the event

## LEADERSHIP & ATHLETICS

### Captain | Northeastern University Club Fencing

*2025 – Present*

- Anchor the epee team to the 2026 Collegiate Fencing Club National Championship
- Lead team operations — scheduling, logistics, recruitment, and practice design — for the full roster
- Serve as primary contact for tournament registration, travel, and university representation at competitions

### Competitive Epee Fencer | Marx Fencing Academy

*2018 – 2025*

- **USA Fencing rating A25** · #103 national / #122 global rank · Top-16 World Cup · **All-American** (2021–2025)

## SKILLS

**Programming:** Python • Java • C# • SQL • MATLAB • HTML/CSS • JavaScript

**Hardware & CAD:** Raspberry Pi • Embedded Systems • Sensor Integration • SolidWorks • AutoCAD

**Tools:** Git • GitHub • Pandas • Linux • VS Code