Liam Lawless

Boston, MA | (617) 875-5972 | lawless.l@northeastern.edu | LinkedIn

EDUCATION

Northeastern University Boston, MA
Khoury College of Computer Sciences May 2025
Bachelor of Science in Computer Science GPA: 3.6
Relevant Courses: Algorithms & Data Structures, Object-Oriented Design, Database Design, Computer Systems, Systems Security, Machine Learning & Data Mining, Artificial Intelligence, Engineering LLM Systems, Software Engineering

TECHNICAL SKILLS

Languages: Python, C, Java, Typescript, JavaScript, SQL, HTML, CSS
Systems: macOS, Linux, Windows
Applications: Git, Visual Studio Code, MongoDB, Postman, Burp Suite, Ghidra, IDA Pro

WORK EXPERIENCE

MORSE Corp Cambridge, MA
Data Science Co-op January 2024 – June 2024

- Developed, tested and optimized machine learning models for target tracking and overhead imagery analysis, assessing performance through statistical analyses to improve accuracy and operational effectiveness
- Collaborated with cross-functional teams to define, design, and ship new features for the United States DoD
- Performed in-depth data analysis to evaluate model performance, assess metadata impact, and develop performance metrics, leveraging Python and SQL to create visualizations for client and internal presentations
- Refactored a high-volume image processing pipeline handling millions of images, implementing parallel processing and optimized algorithms for computing image quality metrics, reducing runtime by over 80%

Vision Technologies Washington, D.C.
Software Engineering Intern June 2022 – November 2022

- Developed software, ensured quality assurance, managed company data, and assisted with on-site installations
- Created software leveraging facial recognition with conference cameras to keep the speaker centered in frame
- Upgraded telecom and audiovisual infrastructure at the U.S. Senate Office Buildings and FDIC Arlington office
- Engaged in weekly team programming meetings to effectively communicate performance and project progression

PROJECTS

NEUoverflow September 2024 – January 2025

- Built a university Q&A web application in Typescript using React, MongoDB, and Express.js to build RESTful APIs
- Worked in an Agile development team, participating in sprint planning, stand-ups, and iterative development
- Engineered secure user authentication with JWT and bcrypt, enhancing platform security and access control

Fitness Analysis Tool June 2024 – August 2024

- Developed a data-driven fitness web application using React and Firebase for in-depth data analysis
- Designed and implemented comprehensive visualizations of heartrate variability, power output, and cadence using D3.js, enabling users to explore detailed insights into their cycling and running fitness performance

AI Natural Selection Simulator September 2023 – December 2023

- Created a generational simulation using Python to visualize the evolution of traits in an agent-based environment
- Implemented a Q-learning model, effectively training agents using TensorFlow and Keras to iteratively run through thousands of episodes, optimizing agent decision making based on a state-action space
- Visualized results of each simulation with a suite of Matplotlib graphs to measure program performance over time

Command Line Shell February 2023 – May 2023

- Collaborated with team members to plan, prototype, and design a functional Unix shell in the C language
- Developed and optimized features with a focus on scalability and extensibility, utilizing modular code

INTERESTS

Clubs: Northeastern University Sailing Team, Northeastern Systematic Alpha Quantitative Finance Club
Volunteer work: The ALS Association, Multiple Sclerosis Society, Interscholastic Sailing Association
Interests: Cycling road racing, Distance running, Rowing, Weightlifting, Ice Hockey