LUKE COLOMBO

lukecolombo.me · lukedwardc@gmail.com · Boston, MA

Education

Northeastern University, Khoury College of Computer Sciences — **Boston, MA**

B.S. in Computer Science & Cognitive Psychology, *magna cum laude* — May 2025

GPA: 3.71/4.00

Relevant Coursework: Database Design, Networks & Distributed Systems, Software Engineering

Skills

Languages: Java | Python | MySQL | JavaScript | React | Scheme/Racket | LaTeX | Bash

Software: PyTorch | OpenCV | Visual Studio Code | Microsoft Excel | SPSS Statistics

Concepts: Git | TCP/IP | Linux Command-Line | Neural Networks | NoSQL | NLP | Reinforcement Learning

Experience

Software Engineering Intern *Agrofocal* — San Francisco, CA | May - Dec. 2024

- Developed AI-driven computer vision tools to support sustainable agriculture through crop monitoring
- Utilized Linux shell scripts to automate inferences and evaluate models; improved accuracy through advanced filtering algorithms and model tuning
- Collaborated on end-to-end development of a novel ground-detection neural network, including data collection, training, evaluation, and system integration
- Optimized model performance, doubling pipeline processing speed while maintaining accuracy

Computer Science Studio Manager *Digital Ready* — Boston, MA | Jul. - Dec. 2023

- Mentored and taught 40+ high-school students in Python, OpenCV, UI/UX, and ML as part of a technical summer bootcamp
- Managed a team of Lab Leaders, created a curriculum emphasizing innovation and real-world applications
- Organized daily lectures and activities; oversaw delivery of student projects in programming and robotics

Projects

Bracket Maker *PostgreSQL, JavaScript, React* — May 2025

- Developed a web app to create and vote on custom tournament brackets for topics like movies or songs
- Integrated a Supabase DB to support importing/exporting brackets, and insightful statistical algorithms like pairwise vote similarity

Settlers of Catan Agent *Python* — Dec. 2024

- Created a Q-learning agent for Catan; implemented decision-making algorithms based on game state
- Built custom simulator and GUI using Pygame to visualize and test agent performance

Spreadsheet *TypeScript, React* — Nov. 2024

- Designed a responsive web-based spreadsheet with interactive formatting, dynamic chart creation, and predictive LLM-driven autofill
- Applied Agile methodologies and OO design patterns in a team of 4; integrated unit testing and CI/CD

Animal Shelter Database *MySQL, Python* — Apr. 2024

- Developed and implemented a management system to track applications at an animal shelter, using a normalized SQL schema with triggers and stored procedures
- Constructed a Python CLI interface with role-based access for volunteers, managers, and visitors

Interests

Proficient in Spanish, Jazz Piano, Mountain Biking, Urban Planning, Music Production, Basketball