

Joseph McLaughlin

✉ mclaughlinj201@gmail.com | 🏠 jmmclaug201.github.io | 📧 jmmclaug201 | 📺 jmmclaug201

Education

Carnegie Mellon University

Pittsburgh, PA

BACHELOR OF SCIENCE IN COMPUTER SCIENCE, GPA: 3.87/4.0

Expected May 2025

- Selected Course Topics: Parallel Algorithms, Computer Systems, Theoretical Computer Science, Machine Learning, Data Structures and Algorithms, Human-Computer Interaction, Probability Theory, Functional Programming.

Experience

CMU Human-Computer Interaction Institute

Pittsburgh, PA

UNDERGRADUATE RESEARCHER

May 2023 - August 2023

- Designed and implemented a Python script to compile Stable Diffusion image generation results and transform into a single image.
- Automated posting daily comparisons of results to a forum using AWS Lambda, crucial to driving traffic to the forum.
- Developed a Twitter bot to share comparison results and generate awareness of biases in current AI models.

Carnegie Mellon University

Pittsburgh, PA

TEACHING ASSISTANT

January 2023 - Present

- Lead weekly recitations and office hours supporting 200+ students in learning parallel algorithm design and functional programming concepts in Standard ML for Carnegie Mellon's "Parallel and Sequential Data Structures and Algorithms" course (15-210).

SUPPLEMENTAL INSTRUCTION LEADER

August 2022 - May 2023

- Led weekly review sessions, designed review materials, and provided tutoring for Carnegie Mellon's "Principles of Imperative Computation" (15-122), a 400+ student Data Structures and Algorithms and C programming course.

Pennsylvania Governor's School for the Sciences

Pittsburgh, PA

TEACHING ASSISTANT / COUNSELOR

June 2022 - July 2022

- Taught programming fundamentals and minimax algorithm design for turn-based games in Python and Java to 70+ students in a five-week course.

Projects

Binder

Website

CO-DEVELOPER

March 2022 - Present

- Develop and maintain a Rails application to facilitate tool transactions and distribution in Ruby using a MySQL database.
- Used by 20+ student organizations and 200+ users for Carnegie Mellon's Spring Carnival, and critical to the event running smoothly.

DFA Simulator

Github

DEVELOPER

April 2023 - June 2023

- Created a website to interactively design and test Deterministic Finite Automata using JavaScript, CSS and HTML.
- Supports creating, naming, moving, and deleting states and transitions, and stepping through inputs to the created DFA.

Cycling Blog

Github

DEVELOPER

July 2023 - Present

- Design a website to view cycling trip posts with an interactive map using Next.js and an associated MongoDB database.

Blackjack Simulator

Github

CO-DEVELOPER

February 2023 - Present

- Develop a terminal interface for simulating and testing Blackjack playing and betting strategies in Python.

Skills

Languages Python, C, C++, Java, Javascript, HTML, CSS, Ruby, Standard ML

Other Rails, React, Next.js, AWS, SQL, MongoDB, PyTorch, Git