

# Joe McLaughlin

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## Education

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### Carnegie Mellon University

Pittsburgh, PA

B.S. In Computer Science | GPA: 3.87

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

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### CMU Human-Computer Interaction Institute

Pittsburgh, PA

Undergraduate Researcher

May 2023 - Present

- Implement a Python script to generate and compile Stable Diffusion image generation results and post to a forum and social media sites via respective APIs.
- In use by WeAudit.org to generate awareness of biases in current artificial intelligence 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 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

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

## Projects

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### DFA Simulator

Github

Developer

April 2023 - June 2023

- Created a website to interactively design and test Deterministic Finite Automata using JavaScript, CSS and HTML.

### Binder

Website

Co-Developer

March 2022 - Present

- Develop a Rails application to facilitate tool transactions and distribution in Ruby using a MySQL database.
- Used by 20+ student organizations and 200+ users in preparation for and during Carnegie Mellon's Spring Carnival.

### Blackjack Simulator

Github

Co-Developer

February 2023 - Present

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

## Skills

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### Programming

Python, C, C++, Java, Javascript, HTML, CSS, Ruby, Standard ML  
Rails, React, SQL, PyTorch, Git