

Jackson Liao-Cheng

Buffalo, NY / jacksonliao78@gmail.com / 716-322-8984

EDUCATION

Cornell University (College of Engineering)

Expected Graduation: May 2028

- B.S., Computer Science & Operations Research

Relevant Coursework: Honors Object-Oriented Design (CS 2112), Discrete Structures (CS 2800), Functional Programming (CS 3110), Eng Probability and Statistics (ENGRD 2700)

RELEVANT EXPERIENCE

American Red Cross

June 2024 - August 2024

Software Engineering Intern

- Built utility script with REST API to archive 25000+ Jira issues, saving extensive manual work
- Developed a Flask-based web application enabling users a way to trigger and monitor archival jobs
- Contributed to tooling supporting migration to Kubernetes on AWS

Kumon

June 2023 - August 2025

Center Assistant

- Guided students from K-12 to solve math and english problems
- Provided feedback to parents and staff, strengthening student progress tracking

Nichols High School

September 2020 - May 2024

Peer Tutoring Co-Head

- Provided STEM tutoring to students through individualized approaches
- Mentored new tutors and coordinated scheduling for 20+ tutors
- Developed a website to offer online resources, growing the program two fold through accessibility

PROJECTS

Critter Simulation

September 2025 - December 2025

- Architected and implemented a parser and AST for a custom critter behavior language
- Applied the visitor design pattern to support AST mutations for evolutionary simulation features
- Engineered the core simulation model, including critter logic, rule evaluation, and world updates
- Built a GUI that renders and simulates worlds, using multithreading to maintain responsiveness.

Tetris Bot

Dec 2024 - March 2025

- Built a fully playable Tetris clone in Python, including numerous piece rotation features
- Developed and trained an autonomous bot that evaluates board states with weighted heuristics
- Achieved improvement through optimized weights using a genetic algorithm and evolved strategies

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, JavaScript, SQL

Technologies: RESTful API, Flask, React, Git, Docker, JUnit

AWARDS

- AIME Qualifier 2x