JOHN ASARO

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EDUCATION

CONNECTICUT COLLEGE, New London, CT — BA expected May 2026
Majors: Computer Science, Psychology — GPA: 3.85
Honors/Awards: Dean's High Honors, Psi Chi, Junior CS Award, ECTA 2025 Best Poster Award
Activities: CS Student Advisory Board Communications Chair, Gaming Club Tournament Organizer

SKILLS

Languages: Python and C++ (with experience in C#, C, Java, Javascript, Go, Lua, and HTML/CSS)
Systems/Tools: Linux, Git, SQL, REST APIs, Azure, Flask, Svelte, PyTorch, Gymnasium, Matplotlib, NumPy

SELECTED WORK EXPERIENCE

AI Researcher, Autonomous Agent Learning Lab — July 2024 - Present
New London, CT

- Created the code behind and coauthored 2 projects that have gone on to be accepted into the prestigious ECTA conference, and were published as conference papers in 2025, one of which winning an award
- Developed software for robotics and game AI research deployed on various systems across the Connecticut College campus

Computational Social Choice Researcher, Summer Science Research Institute (SSRI) — May 2024 - July 2024
New London, CT

- Selected from a large pool of students to conduct research on Social Choice Theory focusing on voting rules
- Created a novel voting rule, modeled it and other state of the art voting rules in Python, and performed empirical tests to demonstrate its efficacy across various metrics compared to said voting rules
- Presented findings in a poster session at fall SSRI Poster Symposium

Software Developer, Zummo Bike — August 2023 - December 2023
Remote

- Wrote key back end components for *Zummo Manage*, a data entry software for the nonprofit *Zummo Bike*
- Built REST APIs with multiple endpoints using Flask, enabling seamless communication between the back end and a Svelte based front end
- Integrated Stripe and Airtable APIs to expand the software's functionality

PROJECTS

Viz Ikemen

- Created Viz Ikemen, a reinforcement learning platform for training AI agents in the open-source fighting game *Ikemen GO* using visual data (inspired by the popular ViZDoom platform!)
- Trained a Deep Q-Network based agent against a case based reasoning bot simulating a skilled real player, eventually converging to a 100% win rate against the sparring partner
- Built a custom game AI interface by extending the *Ikemen GO* engine with real-time screen buffer streaming and external action control pushed directly to the game

Predator Prey Decentralized Cooperative Coevolution

- Designed a simulation for the "predator prey" robotics problem, and extended a method used in previous research with the Autonomous Agents Learning Lab to train AI agents to efficiently solve it

PUBLICATIONS

Decentralized Evolution of Hexapod Gaits with Independent Leg Controllers

- Evolved realistic hexapod gaits using a novel evolutionary algorithm
- Using a simulated environment, we proved our gaits to be robust enough to allow the robot to maneuver rough terrain even with constraints like disabled legs and increased body weight

Niching Agents in The Core

- Conducted research on *The Core*, a competitive co-evolution algorithm that evolves autonomous control without a traditional fitness function
- Implemented evolutionary strategies including tournament selection, crossover, and mutation to develop adaptive agent controllers