Cameron Angliss

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Education

The University of Texas at Austin — Austin, TX
Master of Science - Computer Science - GPA: 3.78 — *Aug. 2023 – Present*

Connecticut College — New London, CT
Bachelor of Arts - Majors: Computer Science, Mathematics, Physics - GPA: 3.99 — *Aug. 2018 – May 2022*

Experience

Software Engineer — June 2022 – July 2023
ThayerMahan, Inc — *Groton, CT*

- Developed frontend and backend aspects of company's software for three major repositories
- Migrated thousands of lines of JavaScript to TypeScript, reduced several years worth of tech-debt
- Communicated with users and observed users interacting with website to understand their perspective
- Implemented highly-requested data visualization upgrades to boost user productivity and capability

DevOps Engineer Intern — May 2021 – August 2021
Nuance Communications, Inc — *Birmingham, MA*

- Selected for internship in elite cloud computing infrastructure team, noticed team's low security score of 20%
- Created pull requests on Docker and Kubernetes files and Python scripts, eliminated 20+ security vulnerabilities
- Fortified team's security score from 20% to 75%, braced team's infrastructure for the 2022 Microsoft acquisition
- Acquired skills in 10+ tools/methodologies (ex. Azure DevOps, Docker, Kubernetes, Helm, Git, Agile workflow)

Math Help Center Tutor, Computer Science TA — August 2019 – May 2022
Connecticut College's Academic Resource Center — *New London, CT*

- Tutored 8 math classes and 3 upper-level computer science classes (Algorithms, AI, Computational Intelligence)
- Designed and implemented creative strategies to familiarize students with particularly difficult concepts
- Determined student's knowledge level, identified areas of weakness, offered extra 1-on-1 help for struggling students
- Appointed as manager of MHC in junior year, optimized MHC to cope with COVID lockdown, scheduled 4 weekly tutoring sessions, informed professors of struggling students, provided mentorship to new math tutors

Projects

Cynthia: The Pokemon Showdown RL Agent | *Python, Pytorch* — March 2023 – Present

- Coded a reinforcement learning agent that learns to play Pokemon battles on Pokemon Showdown website
- Implemented reinforcement learning with Expected SARSA algorithm, softmaxing over outputs to choose action
- Implemented transformers architecture to improve over CNN architecture taking state-based inputs of battle state
- Continuing to research ways to improve system to be competitive with average (eventually expert) human players

Showdown Environment | *Python* — March 2023 – October 2023

- Coded a reinforcement learning environment for agent training on the Pokemon Showdown website
- Includes 3 main parts: a client-side interface written in websockets, an object that reads the website's protocol messages to track the battle's state, and a script to collect data from the website on pokemon, moves, items, abilities, etc
- Published the project on GitHub as open-source code for anybody to use or improve upon for their personal needs

Undergraduate Research in Genetic Algorithms and Robotics | *Haskell* — August 2020 – February 2023

- Conducted independent AI research with Professor Gary B. Parker through research seminars and honors studies
- Built 6 parallel genetic algorithms to evolve teams of neural network agents to generate optimal hexapod gaits
- Utilized math and physics knowledge to design efficient and accurate hexapod simulation for training
- Coded over 1100 lines of code in Haskell, learned modern functional programming techniques
- Authored honors thesis titled "Using Multi-Agent Learning to Achieve Emergent Decentralized Hexapod Gait"
- Coauthored and published "Coevolving Hexapod Legs to Generate Tripod Legs" to ICAART 2023 conference

Technical Skills

Languages: Python/Mojo, Rust, Haskell, Java, JavaScript/TypeScript, HTML/CSS, Mathematica
Frameworks: Angular, Node.js
Developer Tools: Linux, Git, VSCode, Docker, Kubernetes, Azure DevOps, AWS
Libraries: Pytorch, NumPy, Matplotlib, pandas