

Owen Oertell

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EDUCATION

Cornell University

Ithaca, NY

Bachelor of Science in Computer Science; Minor in Mathematics. GPA: 4.09/4.0.

May 2025

- **Relevant Coursework:** Graduate Level Foundations of Reinforcement Learning, Graduate Level Advanced Programming Languages, Compilers, Introduction to Analysis of Algorithms, Object Oriented Programming & Data Structures

Georgia Institute of Technology

Atlanta, GA

Full Time High School Dual Enrollment. GPA: 4.0/4.0.

Aug 2021 - May 2022

- **Relevant Coursework:** Linear Algebra, Multivariable Calculus, Differential Equations, Discrete Mathematics, Graduate Level Computational Foundations of Machine Learning

EXPERIENCE

Lab Researcher

Ithaca, NY

Sun Lab, Cornell University, Bowers CIS Undergraduate Research Experience

May 2023 - Present

- Researching reinforcement learning theory and algorithms with Prof. Wen Sun.
- Currently proving upper and lower bounds for Q^π -realizability on markov decision processes.

Teaching Assistant

Ithaca, NY

CS 4820: Introduction to Analysis of Algorithms

January 2023 - May 2023

Researcher

Ithaca, NY

Cornell University Artificial Intelligence, in Direct Collaboration with Meta AI

September 2022 - Present

- Developing novel techniques for active learning for taxonomy expansion with Prof. Emaad Manzoor. via coarsened shannon entropy.

Lab Researcher

Atlanta, GA

Dickson Lab, Georgia Institute of Technology

May 2020 - August 2022

- Adapted C code from bacterial genome to the human genome for novel copy number variation detection algorithm.
- Reduced memory consumption by 300GB while maintaining speed via parallelization and low-level C programming.
- Assisted in development of efficient blood assay technique for bacterial infection identification.
- Increased data gathering speed by 4x by writing code to use multiple cameras in parallel with single camera port.
- Co-authored low budget blood assay technique paper; submission for publication in process.

Head of Engineering & Secretary on Board of Directors

Boise, ID

Y STEM and Chess Inc 501(c)(3)

April 2020 - July 2022

- Managed 30 undergraduate and professional software engineers.
- Led development of website: YStemAndChess.com to provide free mentoring of underprivileged children from around the world and expand Y STEM and Chess to tutor more than 800 children.
- Engineered and implemented scalable microservice architecture designs to minimize cost.
- Implemented recording storage system allowing parents and students to review lessons.

PROJECTS

PrepByAI.com (Co-Founder)

- Led development of website: PrepByAI.com, a free ACT preparation site.
- Built machine learning model to identify needs and suggest questions to improve performance using term frequency-inverse document frequency and k-means clustering.
- Over 500 regular users and 9,000+ questions answered to date.

PUBLICATIONS

Jackson Kulik, **Owen Oertell**, and Dmitry Savransky. *Overdetermined Eigenvector Approach to Passive Angles-Only Relative Orbit Determination*. Journal of Guidance, Control, and Dynamics, 2023. Under Review.

AWARDS

- Chamblee High School Magnet Salutatorian.
- Technology Student Association National Competition (each category 500+ submissions): 2nd in software development for DataManager project; Top 25 for data science for pulsar star detection deep neural network.
- National Merit Scholarship Recipient.
- Presidential Scholar Semi-finalist.

TECHNICAL SKILLS

Languages: C (OpenACC, OpenMP), Python C++, Java, SQL, C#, JavaScript, Ruby, HTML/CSS

Developer Tools: Jupyter Notebooks, Git, Docker, Kubernetes, VS Code, Amazon AWS, VIM, Makefiles

Libraries: TensorFlow, Valgrind, Numpy, Pandas, OpenCV, Pillow, Matplotlib

Frameworks: React.js, Angular.js, Electron.js, Node.js, Express.js, .NET core

Databases: PostgreSQL, MongoDB