

Owen Oertell

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EDUCATION

Cornell University

Ithaca, NY

Bachelor of Science in Computer Science; Minor in Mathematics. GPA: 4.1/4.0.

May 2025

- **Relevant Coursework:** Foundations of Reinforcement Learning*, 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, Computational Foundations of Machine Learning*

** denotes graduate level*

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.
- Developing and implementing algorithms for reinforcement learning for diffusion models.

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 via coarsened shannon entropy with Prof. Emaad Manzoor.

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

Overdetermined Eigenvector Approach to Passive Angles-Only Relative Orbit Determination

Jackson Kulik, **Owen Oertell**, and Dmitry Savransky. 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), OCaml, 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