Owen Oertell

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Education

Cornell University — Ithaca, NY
Bachelor of Science in Computer Science, Electrical Computer Engineering; Minor in Mathematics. GPA: 4.09/4.0. — *May 2025*
- **Relevant Coursework**: **Graduate Level** Foundations of Reinforcement Learning, **Graduate Level** 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

Teaching Assistant — Ithaca, NY
CS 4820: Introduction to Analysis of Algorithms — *January 2023 – Present*

Researcher — Ithaca, NY
Cornell University Artificial Intelligence, in Direct Collaboration with Meta AI — *September 2022 – Present*
- Participating in reading groups for Reinforcement Learning, Computer Vision, and MLSystems.
- Researching methods for Reinforcement learning based program synthesis.

Lab Researcher — Atlanta, GA
Dickson Lab, Georgia Institute of Technology — *May 2020 – Present*
- 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.
- **Utilities**: C (Serial and Parallelized), OpenMP, OpenACC, Makefiles, OpenCV, Linux, Python, Valgrind

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 SWEs.
- 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.
- Interviewed and hired interns and full time developers.
- Engineered and implemented scalable microservice architecture designs to minimize cost.
- Developed real-time chess pairing and mentoring system.
- Implemented recording storage system allowing parents and students to review lessons.
- **Utilities**: Node.js, PHP, AWS, Angular.js, MongoDB, Docker, Kubernetes

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.
- **Utilities**: Flask, PostgreSQL, TensorFlow, React.js, JavaScript, Python

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.
- Georgia Science and Engineering Fair Award for *Novel Application of Document Distance for CNV Detection.*
- National Merit Scholarship Recipient.
- Presidential Scholar Semi-finalist.

Technical Skills And Interests

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
Interests: Mathematics (Pure and Applied), Thoretical Machine Learning, Go (board game), Magic: The Gathering, Golf