

Eagle Yuan

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Portfolio: github.com/eagleyuan21

Personal Website: eagleyuan.com

EXPERIENCES

Northeastern University Computer Architecture Research Laboratory

July 2020 – Present

Research Assistant

Boston, MA

- Added new visualization and tool features to MGPUSim, a multi-GPU simulator written in the Go language based on Advanced Micro Device's GCN3 instruction set architecture.
- Contributed to updating MGPUSim to NaviSim, transitioning from AMD's previous GCN architecture to the newer RDNA architecture.
- Gained expertise in parallel computing through simulation development and analysis and training.

National Aeronautics and Space Administration

May 2020 – July 2020

Lucy Space Mission Concept Academy Trainee

Virtual

- Gathered NASA mission development skills during weekly training from NASA scientists and engineers.
- Collaborated as the lead engineer with other trainee members on designing an interdisciplinary Lucy probe mission related virtually distributed team project.
- Produced a preliminary design review for a new, large payload targeted towards exploring an alternative landing site from NASA's Perseverance Mars Rover site selection.

Northeastern University Sociology and Anthropology Department

September 2019 – May 2020

Research Assistant

Boston, MA

- Used a social network approach and data scrapping strategies to study the diffusion of innovative ideas on systemic change and gender equity among NSF ADVANCE grantees and beyond.
- Collected data through access of websites, journals, conference materials and organize data in spreadsheets.
- Handled software programs for statistical, network analysis and visualization such as Python, MATLAB, and R.

Oak Ridge National Laboratory, Center for Nanophase Materials Sciences

June 2018 – May 2019

Research Intern

Oak Ridge, TN

- Used Agent-Based Modeling techniques to mimic the collective mechanics of Black Soldier Fly Larvae.
- Implemented a genetic algorithm to calibrate and optimize parameters in the Agent-Based Model.
- Developed and tested the model and presented posters with the collaboration of another intern and a mentor.
- Southern Appalachian Science and Engineering Fair (affiliated regional fair of ISEF) 4th Place award.

EDUCATION

Northeastern University

Expected May 2023

BS, Major in Computer Engineering and Computer Science, Minor in Mathematics

Boston, MA

- University Honors College, Honor's Early Research Award Recipient, Dean's List; 3.92 GPA
- Coursework: Discrete Math, Probability and Statistics, Embedded Design, Circuits and Signals
- Activities: Code4Community Mentee, Northeastern Symphony Violinist

Oak Ridge High School

May 2019

High School Diploma with Honors

Oak Ridge, TN

- National Honor Society, National AP Scholar; ACT Combined: 35; 4.69 GPA
- Coursework: AP Chemistry (4), Calculus BC (5), Physics C (5 on both), Computer Science A (5), Linear Algebra, Calculus 3, Differential Equations
- Activities: Math Club, Scholars Bowl, Tennessee All State Orchestra Violinist, Varsity Soccer

SKILLS & INTERESTS

- **Skills:** Java, Python, C/C++, MATLAB, HTML, CSS, JavaScript, Go, Scheme, FPGA Prog, Arduino, Verilog, GIT, SolidWorks, AutoCAD, Netlogo, Windows/Mac/Linux OS, Microsoft Office, Soldering
- **Interests:** Math, Robotics, Space Exploration, AI, Physics, High Performance and Quantum Computing