**John Wu**

jhnwu3@gmail.com

7160 Sumption Drive – New Albany, OH - 43054

614-638-7981

**RESEARCH INTERESTS**

* Applied Computer Vision
* High Performance Computing for Modeling

**EDUCATION**

The Ohio State University, Columbus, OH

B.S. Computer Science Engineering, Expected Graduation: May, 2023

Overall GPA (4.00 scale): **3.94**;

**QUALIFICATIONS**

Coding Languages: C/C++, Python, Java, MATLAB, Ruby on Rails

Operating Systems: Linux, Windows, MacOS

Technical Tools: MS Office Suite, Microcontrollers, Docker

Coursework: Data Structures and Algorithms, Deep Learning, Bayesian Machine Learning

**RELEVANT EXPERIENCE**

Research Student, Rerout Lab May 2022 - Ongoing

* Built infrastructure for the Docker containerization process of the model commons

Research Assistant, Das Lab Feb 2021 – Ongoing

* Developed simulation software in C/C++ to estimate rate constant kinetics for NK cell proteins.
* Improved simulation performance by a factor of 10x, specifically particle swarm optimization component, through parallel programming.
* Processed and trained a CNN on mass cytometry data.

Undergraduate TA Aug 2021 – Dec 2021

* Graded and tutored students in introductory C/C++ programming course

Software Intern, Converge Technologies May 2020 – Aug 2020

* Developed PWM firmware for a high voltage Stirling engine for industrial coolers
* Extensively worked with microcontrollers
* Ensured quality of custom analog-digital camera sensors through testing
* Improved power efficiency of motors using harmonic elimination PWM

**RESEARCH PREPRINTS AND CONFERENCES**

John, Wu, et al. “Generalized Method of Moments Improves Parameter Estimation in Biochemical Signaling Models of Time-Stamped Single-Cell Snapshot Data.” *BioRxiv*, Preprint, 1 Jan. 2022, https://www.biorxiv.org/content/10.1101/2022.03.17.484491v1.

“Generalized Method of Moments improves parameter estimation in biochemical signaling models of time-

stamped single-cell snapshot data”, QBio Conference, June 2022.

**PROJECTS**

Robot Project January 2020 – May 2020

* Collaborated with a group to design a robot to navigate a complex course
* Coded in C/C++ as the main coder for the team
* Received A on the project and successfully passed all benchmark tests

Andrew Ng Machine Learning Coding Assignments June 2021 – Aug 2021

* Implemented various basic machine learning algorithms including logistic regression, two-layered neural networks, and various others to classify digits.

Software Design Project Nov 2019 – Dec 2019

* Developed and marketed a story game in C/C++ with a partner
* Produced a functioning text game: voted for best marketing and received an A on project