

Geoffrey Wu

New York, NY | (630) 360-9012 | gw2447@columbia.edu | [Github](#) | [Linkedin](#) | [Website](#)

Skills: Python · Java · C/C++ · HTML/CSS/Sass · Javascript/Typescript · Wolfram | **Machine Learning:** Tensorflow · Keras · PyTorch · Pandas | **Web Development:** ReactJS · MongoDB · Express · NodeJS · Pug · Hugo | SQL · Excel

EDUCATION

Columbia University, NY – *B.S. in Computer Science and Mathematics* August 2021 - May 2025

GPA: 4.14/4.00 | Dean's List | Fu Foundation School of Engineering and Applied Science

Coursework: Machine Learning | Artificial Intelligence | Intro to Databases | Analysis of Algorithms 1 | Advanced Programming | NLP | CS Theory | Data Structures | Modern Analysis 1 | Linear Algebra | Multivariable Calculus

Activities: Quiz Bowl Club – Vice President | Undergraduate Math Society | Youth For Debate – Judge & Coach

WORK EXPERIENCE

Research Assistant, Columbia University, New York, NY January 2024 - Present

Matei Ciocarlie – Robotic Manipulation and Mobility Lab

Teaching Assistant, Machine Learning January 2024 - Present

Teaching Assistant, Discrete Mathematics September - December 2023

Columbia University – Computer Science Department.

Quantitative Trading Intern, Bala Cynwyd, PA June - August 2023

Susquehanna International Group (SIG).

- Built **reinforcement learning** trading bot to trade under unusual market conditions (BA, GME, SIVB).

Course Assistant, Data Structures September - December 2022

Columbia University – Computer Science Department.

Research Assistant, Columbia University, New York, NY January 2022 - April 2023

Heffner Biomedical Imaging Lab.

- Developed CNN and topological data analyses for preeclampsia detection from retinal fundus images.
- Generated vascular segmentation images using neural networks RV-GAN & spatial-attention U-NET.
- **Published** into the *20th International Symposium on Biomedical Imaging (ISBI)* as second author [here](#).

Machine Learning Research Intern, Oak Ridge National Lab, Oak Ridge, TN June - August 2022

US Department of Energy – Science Undergraduate Laboratory Internship (SULI) Program.

- Compressed 70,000 2D neutron spectroscopy images using autoencoders written in PyTorch.
- **Published** into *Machine Learning: Science and Technology* journal as second author [here](#).

PROJECTS

qbreader.org August 2021 - Present

- Built [website](#) to read quizbowl questions w/ **JS**; responsive layout & dark mode w/ **CSS** from **Sass** & **Bootstrap**; **custom API** and documentation w/ **Express**, live multiplayer w/ **WebSockets**, searchable **database** w/ **ReactJS**, stateful login system for 3000+ users w/ **JWT**, and integrated payment with **Stripe**.
- Serves 1,000,000+ requests to 10,000+ unique users/week with an average response time under 5 ms.
- Wrote a [python program](#) to parse 270,000+ questions and category-tag using **Naive Bayes classifier**.

HONORS AND AWARDS

Awards: 2022 Putnam Math Competition – Top 200 | 2021 International Olympiad on Astronomy and Astrophysics – Gold Medalist | 2019-21 USA Computing Olympiad – Platinum | 3x USA Math Olympiad Qualifier

Scholarships: 2021-25 Fermi Research Alliance Scholarship | 2021-25 National Merit Scholarship