

# Mudi Yang

[my2836@columbia.edu](mailto:my2836@columbia.edu) • [GitHub](#) • [Website](#) • [LinkedIn](#)

## Education

### Columbia University

Master of Science in Computer Science (GPA: 3.76)

2023–2025 (Part-time)

[Thesis Track](#) (Quantum Compilation); Advisor: Henry Yuen

### Yale University

Bachelor of Science in Computer Science (GPA: 3.60)

2018–2022

Teaching Assistant: CPSC 474/574 Computational Intelligence for Games; CPSC 201 Mathematical Tools for Computer Science

## Work & Research

### Graphics Compiler Engineer, Qualcomm (Adreno Graphics Compiler) 2022–Present

- Develop and maintain features in Qualcomm's Adreno graphics high-level compiler targeting OpenGL.
- Summer 2021 Intern: Built an AMBER-based unit-testing framework for graphics and compute shaders.

### MS Student Researcher, Rubenstein & Yuen Group, Columbia University 2024–Present

- Contributing to QExpress, a cross-platform optimizing compiler for neutral-atom, superconducting, and trapped-ion quantum computers.

### Student Researcher, Bhattacharjee Group, Yale University

2021–2024

- Developed, tested, and analyzed a quantum random-walk model for the two-alternative forced-choice (2AFC) decision problem (continuation of senior thesis).

### Undergraduate Learning Assistant, Yale Dept. of Computer Science

2021–2022

- Assisted instruction and student support in CPSC 474/574 and CPSC 201.

### Summer Student Researcher, Gerstein Bioinformatics Lab, Yale University 2019–2021

- Full-stack development for the PARSE project identifying potentially causal RNA-binding proteins and linkage disequilibrium variants related to disease.

### Summer Student Researcher, Ernst Lab (Bruins in Genomics), UCLA Summer 2020

- Implemented a machine-learning extension of the Sharpr-MRPA statistical model for regulatory genomics analysis.

### Student Researcher, Radev Group & LILY, Yale University

Summer 2019

- Designed a hybrid extractive–abstractive deep learning model for multi-document summarization.

## Publications

### Exploring the Impact of Sentiment Analysis on Current Methods of Fake News Detection.

M. Yang, L. Flores, H. Hunma, B. Trevisan. *Yale Undergraduate Research Journal* 3(1), 2022

- Implemented a BERT-based sentiment analysis module for fake-news detection pipelines. [link](#)

### Radiation Emissions of Primordial Black Holes as Dark Matter in a Dwarf Galaxy.

M. Yang, K. Holley-Bockelmann, F. Munshi. *Young Scientist* 8:52–54, 2018

- Modeled expected radiation signatures under the primordial black hole dark matter hypothesis

using Vanderbilt University computational resources. [link](#)

## Thesis & Pre-print

---

### The QUATRO Application Suite: Quantum Computing for Models of Human Cognition.

R. P. Pothukuchi et al., including M. Yang. [link](#) (Submitted 2024)

### A D-Wave–Annealing-Based Quantum Random Walk Model of Cognition.

Undergraduate Senior Thesis

- Developed quantum random walks on D-Wave systems as part of the QUATRO project.

## Fellowships, Awards & Programs

---

### STAQ Quantum Ideas Summer School, Duke University

Summer 2023

- Admitted to competitive quantum computing summer school at Pratt School of Engineering.

### Cornell–Maryland–Max Planck Pre-Doctoral Research School

Summer 2022

- Selected for summer research school at the Max Planck Institute for Software Systems.

### YHack Hackathon

Winter 2022

- Built Android COVID resource app (contact tracing, social distancing mapping, VR distance tool). Top 5 finalist; Awards: Best COVID-19 Related Hack (Citadel), Best Use of Google Cloud (Google), Google Cloud COVID-19 Hackathon Fund.

### UCLA Bruins in Genomics (BIG) Research Program (NSF REU)

Summer 2020

- Fully funded undergraduate computational genomics summer research internship.

### UCLA BIG Research Excellence Award

Summer 2020

- Recognized among top student researchers in the BIG cohort.

### Yale College Dean's Research Fellowship

Summer 2020

- \$1,500 in support of original undergraduate STEM research.

### Pembroke King's Programme, University of Cambridge

Summer 2019

- Admitted to international summer study program at Pembroke and King's Colleges.

### Davenport College Richter Fellowship

Summer 2019

- \$1,000 travel/research award for study abroad.

### Yale College First-Year Summer Research Fellowship

Summer 2019

- \$4,500 to support first-year STEM research.

## Leadership & Service

---

### Co-President, Yale Undergraduate Aerospace Association

2020–2021

- Led largest on-campus engineering organization as one of two co-presidents.
- High-Altitude Balloon Team Lead (2019–2020); project received 2019 NASA Connecticut Space Grant.

### Davenport Liaison, Davenport Pops Orchestra (Yale)

2019–2022

- Coordinated grants, performance logistics, and liaison activities among the orchestra, Davenport College, and Yale administration.