Mudi Yang

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Education Yale University 2018 - 2022

- Bachelor of Science in Computer Science. GPA 3.60.

Work & Research

Qualcomm Software Engineer: Graphics High Level Compiler team. *2022-Present*

- Develop new features and maintain support for Qualcomm's Adreno Graphics Compiler focusing on Vulkan API.
- Developed AMBER based unit testing frame work for graphics and compute shaders. *Internship Summer 2021*

Student Researcher, Bhattacharjee Group, Yale. *2022-Present*

- Developed micro benchmarks to profile TLB-shootdown causes and behavior on Linux NUMA systems.

Undergraduate Senior Thesis, Bhattacharjee Group, Yale. *Spring 2022*

- Continuation of senior thesis work. Developed, tested, and analyzed a quantum random walk model for the two alternative forced choice decision problem. *Manuscript in Progress.*

Undergraduate Learning Assistant, Department of Computer Science, Yale. *2021-2022*

- Teaching assistant for CPSC 474/574 Computational Intelligence for Games and CPSC 201 Mathematical Tools for Computer Science.

Student Researcher, Gerstein Bioinformatics Lab, Yale. *2019-2021*

- Full stack development on PARSE Project for identifying potentially causal and LD RBPs related to disease.

Summer Research Intern, Ernst lab, UCLA Bruins in Genomics Program. *Summer 2020*

- Developed machine learning extension to extend the Sharpr-MRPA statistical model for genomic analysis with the Jason Ernst Lab in the UCLA Institute for Quantitative and Computational Biosciences.

Student Researcher, Radev Group & LILY, Yale. *Summer 2019*

- Designed extractive-abstractive model for DNN based multi-document summarization and experiments to test its capabilities, benchmarked extractive model on the Multi-news dataset.

Papers

Mudi Yang, et al. Exploring the impact of sentiment analysis on current methods of fake news detection. *Yale Undergraduate Research Journal*. Vol 3.1. 2022

- Developed BERT based sentiment analysis DNN to extend fake news detection algorithms.

A D-Wave Annealing Based Quantum Random Walk Model of Cognition, Bhattacharjee Group, Yale. *Undergraduate Senior Thesis.*

- Developed quantum random walk on D-Wave quantum annealing system to model the two alternative forced choice decision problem. This work will be included in a larger manuscript currently under preparation.

Prioritizing And Visualizing GWAS Variants in the RBP Regulome, Gerstein Lab, Yale. *Unpublished, merged into larger project.*

- Developed tools to identify, visualize, and analyze disease and GWAS variant correlation in multi-ethnic genomic data.

Mudi Yang, Kelly Holley-Bockelmann, Ferah Munshi. Radiation Emissions of Primordial Black Holes as Dark Matter in a Dwarf Galaxy. *Young Scientist*. Vol 8. 52-54. 2018

- Modeled and evaluated the physical consequences of the Primordial Black Hole as Dark Matter hypothesis utilizing computational resources of the Vanderbilt University Department of Physics and Astronomy.

Fellowships, Awards & Programs

The Cornell, Maryland, Max Planck Pre-doctoral Research School. *Summer 2022*

- Admitted to and fully funded to attend summer program led by Cornell, Maryland, and Max Planck faculty at the Max Planck Institute for Software Systems, Saarbrücken, Germany.

YHack. *Winter 2022*

- Developed android COVID resource app with contact tracing, social distancing mapping, and VR social distancing "ruler" Top 5 project finalist. Won 3 awards: Best COVID-19 Related Hack (Citadel), Best Use of Google Cloud (Google), Best Use of Google Cloud - COVID-19 Hackathon Fund (Google).

UCLA Bruins in Genomics (BIG) Research Program. *Summer 2020*

- Selected to conduct fully summer funded undergraduate computational genomics research at UCLA. NSF REU Program.

UCLA Bruins in Genomics Research Excellence Award. *Summer 2020*

- Awarded to exceptional student researchers of the BIG summer program.

Yale College Dean's Research Fellowship. *Summer 2020*

- $1,500 to fund original undergraduate STEM research at Yale.

Pembroke King's Programme. *Summer 2019*

- Selected to attend summer program at Pembroke and King's colleges, Cambridge, United Kingdom.

Davenport College Richter Fellowship. *Summer 2019*

- $1,000 award for Davenport College students seeking to study abroad. Davenport is a residential college at Yale.

Yale College First-Year Summer Research Fellowship. *Summer 2019*

- $4,500 award to fund first year summer undergraduate research in STEM at Yale.

Leadership & Extracurriculars

Co-President of Yale Undergraduate Aerospace Association. *2020-2021*

- Leader of largest on campus engineering club as one of two co-presidents.
- Supervise all club activities, advise all projects, manage all project leaders.
- Team leader of High Altitude Balloon project in 2019-20. Balloon team received a 2019 NASA Connecticut Space Grant for Student Projects.

Davenport Liaison for Davenport Pops Orchestra. *2019-2022*

- Coordinate grants, performance spaces, and relations between Davenport Pops Orchestra, Davenport College, and Yale.