

Mudi Yang

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Education

Yale University 2018 - Present

- Bachelor of Science in Computer Science. Expected Graduation May 2022.
- Teaching Assistant for Computational Intelligence for Games, Mathematical Tools for Computer Science.

Internships & Research

Qualcomm Software Engineering Intern: Graphics High Level Compiler team. *Summer 2021*

- Developed AMBER based unit testing frame work for graphics and compute shaders.
- Identified and implemented extensions to AMBER based graphics pipeline testing needs.

Gerstein Bioinformatics Lab, Yale. *2018-2021*

- Full stack development on PARSE Project for identifying potentially causal and LD RBPs related to disease.
- Recieipient of Yale College Dean's Research Fellowship.

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.

Language, Information, and Learning at Yale Laboratory with Dr. Dragomir Radev *Summer 2019*

- Designed extractive-abstractive model for DNN based multi-document summarization (PyTorch).
- Designed experiments to test its capabilities, tested baselines for extractive models on the Multinews dataset.

Major Projects

YHack 2020

- 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).
- Awarded \$1500 Google COVID-19 Hackathon funding, app currently under further development.

HackMIT 2021

- Developed Django based website for users post and discover street art in New Haven with Google Maps integration.

Systems Programming Major Projects

- **Final Project:** Implemented free list malloc AIP using brk, sbrk system calls. Implemented free, realloc, calloc, heap_info, and defrag_heap.
- **Implemented** C stdio library with caching, beat stdio.h speeds for read, write, seek. Implemented synchronization primitives from syscalls.

Computational Intelligence for Games Major Projects

- Linear programming based [algorithm](#) for find optimal [Blotto](#) moves and equilibria.
- Monte Carlo tree search [algorithm](#) for [Kalah](#).

Publications

Mudi Yang, et al. Exploring the impact of sentiment analysis on current methods of fake news detection *Yale Undergraduate Research Journal* Vol 2.2 2021

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

Mudi Yang, et al. Prioritizing And Visualizing GWAS Variants in the RBP Regulome. *Publication Pending*

- Developed back-end for project and full-stack for PARSE project website at Gerstein lab, Yale University.
- Manuscript under review for publication in RNA.

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.

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, direct management of all project leaders. Recipient of an 2019 NASA Connecticut Space Grant for Student Projects.