

Yongye Zhu

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<https://zyongye.github.io>

Education

Master of Science, Electrical Engineering and Computer Science, May 2025

University of California, Berkeley
Advisor: Christopher W. Fletcher

Bachelor of Science, Electrical and Computer Engineering

Bachelor of Science, Mathematics

The University of Texas at Austin

Peer-Reviewed Publications

[1] Y. Zhu, S. Wei and M. Tiwari, "Revisiting Browser Performance Benchmarking from an Architectural Perspective," in *IEEE Computer Architecture Letters*, 2022, doi: 10.1109/LCA.2022.3210483.

Experiences

Graduate Research Assistant, UIUC FPSG Lab

August 2023 – Present

- Work on developing RTL analysis tool to automatically proof the safety of given instruction in a given microarchitecture.

Open-Source Contributor, GnuTLS (<https://www.gnutls.org>)

March 2023 – Present

- Implement Kernel TLS acceleration on FreeBSD to speed up TLS record encryption and decryption, result in 35% increase in bandwidth and reduce 5% CPU usage.
- Improve unit test coverage and speed by add new test cases and combine client/server in single thread.

Cloud Software Engineer Intern, Palo Alto Networks

May 2022 – August 2022

- Enhance observability and debuggability of critical 5G network infrastructure.
- Develop tools that assist operation team better manage cloud services

Student Researcher, UT Spark Research Lab

June 2020 – December 2022

- Working with Prof. Mohit Tiwari on profiling fine-grained isolation techniques and performance/security impact on commercial computing platforms.
- Design new metrics for applications to help computer architect better optimize computing platform.

Software Development Engineer Intern, Amazon Web Services

June 2021 – August 2021

- Develop server-side script execution engine using container to execute cloud diagnostic script for Cloud Support Engineer.
- Harden the security for the containers by building a completely isolated network environment.
- Deep dive into AWS serverless technology such as API Gateway, Lambda, AWS Batch and IAM.

Projects

BitTorrent Client in C++

- Design and implement efficient bencode parser to parse torrent file.
- Implement a multi-threaded queuing algorithm to efficient download the files from peers.

Skills & Misc

- Proficient language & skills: C, C++11, Python, Git, Linux, Swift, Java, TypeScript, AWS

Teaching Assistant: Operating System, Intro to Computing System

Eligibility: Eligible to work in the US ("Green Card")

Accomplishment

Recipient, John and Page Schreck Endowed Presidential Scholarship, Fall 2022

Participant, ACM Student Research Competition at SIGMICRO 2021, Fall 2021

Recipient, Myra and Dennis Dria Endowed Scholarship, Fall 2019, Fall 2020, Fall 2021