

ZHENG LI

+1(734) 510-4706 ◊ Ann Arbor, MI ◊ jimmyli@umich.edu ◊ <https://jimmylizheng.github.io/>

RESEARCH INTERESTS

Computer Networks, Mobile Computing, Multimedia Systems and Machine Learning.

EDUCATION

University of Michigan

Ph.D. Computer Science and Engineering

Advisor: Jiasi Chen

B.S.E. Computer Science (Dual Degree)

Graduated with Summa Cum Laude

Ann Arbor, MI

Expected May 2029

August 2022 - May 2024

Shanghai Jiao Tong University

B.S.E. Electrical and Computer Engineering (Dual Degree)

Graduated as a Shanghai Outstanding Graduate

Shanghai, China

September 2020 - August 2024

PUBLICATIONS

Xuechen Zhang* and **Zheng Li*** (*: co-primary), Samet Oymak, Jiasi Chen. “Text-to-3D Generative AI on Mobile Devices: Measurements and Optimizations” *ACM SIGCOMM Workshop on Emerging Multimedia Systems*, 2023.

Zheng Li, Caiwei Chen, and Pradeep Kumar Ray. “Robotics for Autism- Robotic Technologies for ASD Treatment.” *Asian Hospital & Healthcare Management*, ISSUE 57, 2022.

PRESENTATIONS

ACM SIGCOMM Workshop on Emerging Multimedia Systems, New York, NY

September 2023

Text-to-3D Generative AI on Mobile Devices: Measurements and Optimizations (oral)

RESEARCH EXPERIENCE

Research Assistant in MAVENS Lab

University of Michigan, Supervisor: Jiasi Chen

May 2023 - Present

Ann Arbor, MI

- Implemented an efficient 3D gaussian scene delivery framework on Meta Quest 3 using WebXR and WebGL.
- Built an efficient 3D gaussian scene delivery scheduler based on viewport prediction, bandwidth prediction, and 3D gaussian significance scores.
- Measured and compared 3D scene delivery visual quality of different 3D gaussian ranking algorithm designs using PSNR and SSIM.
- Designed ranking algorithms for 3D gaussians to optimize 3D scene delivery efficiency.
- Evaluated model performance (including latency, memory usage, Quality of Experience etc.) of different Text-to-3D generative AIs on server GPUs and mobile GPUs.
- Analyzed the inefficiency of different 3D generative models and their corresponding optimization strategies in the context of mobile systems.

Research Assistant in RobustNet Lab

University of Michigan, Supervisor: Z. Morley Mao, ACM & IEEE Fellow

January 2023 - December 2023

Ann Arbor, MI

- Developed a customized network performance measurement system for Starlink that can measure basic network performance parameters including round trip time, throughput etc.
- Implemented handover recognition algorithms for Low Earth Orbit satellites (LEO) handover problems based on network measurements (e.g. round trip time, loss and throughput).
- Predicted satellite handover events based on Satellite trajectory prediction using Kalman filter.

- Developed Multipath TCP simulation shell for LEO network simulation based on open source software Mahimahi.

Student Assistant of JI Centre For Entrepreneurship

July 2021 - August 2022

Shanghai Jiao Tong University, Supervisor: Pradeep Kumar Ray

Shanghai, China

- Proposed a low-cost autism diagnosis system using eye-tracking technologies based on computer vision.
- Reviewed current robotic technologies used in autism diagnosis and treatment and published a paper on AHM.

PROFESSIONAL SERVICE

Instructional Aide of EECS 498/598: Mobile Interactive Multimedia Systems

January 2024 - May 2024

University of Michigan, Supervisor: Jiasi Chen

Ann Arbor, MI

- Hosted weekly office hours, led weekly in-class coding activities, designed and graded assignments.

Teaching Assistant of Honor Physics (VP160)

May 2022 - August 2022

Shanghai Jiao Tong University, Supervisor: Mateusz Krzyzosiak

Shanghai, China

- Hosted weekly recitation classes, office hours, graded weekly assignments and designed problems for exams.
- Awarded Excellent Teaching Assistant Award (10 recipients each year).

Writing Consultant of JI Writing Center

September 2021 - September 2023

Shanghai Jiao Tong University, Supervisor: Amalia Jiva

Shanghai, China

- Held consulting sessions to guide the students in JI to improve their essays and writing skills.
- Led a group of writing consultants to provide embedded consulting services for the course VY200 (Academic Writing II).

Software Engineer Intern

December 2021 - March 2022

TURINGO

Shanghai, China

- Implemented testing programs for the laser routing programs.
- Designed storage pipelines for light storage chips based on Reed–Solomon-codes and quantum encryption.

HONOR & AWARDS

Shanghai Outstanding Graduate (top 3%), <i>Shanghai</i>	2024
James B. Angell Scholar, <i>UMich</i>	2024
ACM SIGCOMM Travel Grant, <i>NSF</i>	2023
McLane Family Scholarship, <i>UMich</i>	2023
Roger King Scholarship, <i>UMich</i>	2023
The Jackson and Muriel Lum Scholarship (5 recipients each year), <i>UMich</i>	2022, 2023
Wang Chu Chien-Wen Research Award (2 recipients in 2023), <i>UMich</i>	2023
University Honors, <i>UMich</i>	Fall 2022, Winter 2023, Fall 2023
College of Engineering Dean's Honor List, <i>UMich</i>	Fall 2022, Winter 2023, Fall 2023
JI Excellent Teaching Assistant Award (10 recipients each year), <i>SJTU</i>	2023
SJTU Undergraduate Excellent Scholarship Class A (top 2 %), <i>SJTU</i>	2022
The 2021 University Physics Competition Bronze Medal Winner	2022
The John Wu & Jane Sun Sunshine Scholarship, <i>SJTU</i>	2021
UM-SJTU Joint Institute Student Development Scholarship, <i>SJTU</i>	2021

SKILLS

Computer: C++, C, Python, CUDA, Pytorch, SQL, HTML, Linux, MATLAB, JavaScript, Git, LaTeX
Language: Bilingual in Chinese and English

EXTRA-CURRICULAR ACTIVITIES

Member of *Tau Beta Pi* Engineering Honor Society