

ZHENG LI

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EDUCATION

University of Michigan, Ann Arbor, MI
B.S.E. Computer Science (Dual Degree)

Expected May 2024
Cumulative GPA: 3.95/4.00

Shanghai Jiao Tong University, Shanghai, China
B.S.E. Electrical and Computer Engineering (Dual Degree)

Expected August 2024
Cumulative GPA: 3.83/4.00

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

September 2023

RESEARCH EXPERIENCE

Research Assistant in SOTA Lab
University of Michigan
Supervisor: Jiasi Chen, Samet Oymak

May 2023 - Present
Ann Arbor, MI

- Published a paper in ACM SIGCOMM Workshop on Emerging Multimedia Systems (EMS).
- Research work won one of the two Wang Chu Chien-Wen Research Award in 2023.
- Evaluated model performance (including latency, memory usage, Quality of Experience etc.) of different Text-to-3D generative AIs on server GPUs and mobile GPUs.
- Designed system structure and pipelines for distributed Text-to-3D generation.
- Analyzed the inefficiency of different 3D generative models and their corresponding optimization strategies in the context of mobile systems.
- Designed ranking algorithms for 3D gaussians to optimize 3D streaming efficiency.
- Implemented viewport dependent 3D streaming based on 3D gaussian ranking algorithms.
- Measured and compared 3D streaming visual quality of different 3D gaussian ranking algorithm designs using PSNR and SSIM.

Research Assistant in RobustNet Lab
University of Michigan
Supervisor: Z. Morley Mao, IEEE Fellow

January 2023 - Present
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 a Multipath TCP simulation shell for LEO network simulation based on open source software Mahimahi.
- Reviewed current literatures about network system design of LEO.

Student Assistant of JI Centre For Entrepreneurship

Shanghai Jiao Tong University
Supervisor: Pradeep Kumar Ray

July 2021 - August 2022

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.
- Reviewed current technology integration practice in education and the barriers they face.

PROFESSIONAL SERVICE

Instructional Aide of EECS 498: Mobile Interactive Multimedia Systems

University of Michigan, Supervisor: Jiasi Chen

January 2024 - Present

Ann Arbor, MI

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

Member of Barger Leadership Institute

University of Michigan

October 2022 - Present

Ann Arbor, MI

- Led a project in the BLI leadership lab that aimed to improve UM students' sense of belonging through improving MDining's service quality.

Writing Consultant of JI Writing Center

Shanghai Jiao Tong University, Supervisor: Amalia Jiva

September 2021 - April 2023

Shanghai, China

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

Teaching Assistant of Honor Physics (VP160)

Shanghai Jiao Tong University, Supervisor: Mateusz Krzyzosiak

May 2022 - August 2022

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).

Software Engineer Intern

TURINGO

December 2021 - March 2022

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

ACM SIGCOMM Travel Grant	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
College of Engineering Dean's Honor List, <i>UMich</i>	Fall 2022, Winter 2023
University Honors, <i>UMich</i>	Fall 2022, Winter 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, Verilog, LaTeX
Language: Bilingual in Chinese and English