

# ZHENG LI

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## RESEARCH INTERESTS

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Computer Networks, Mobile Systems, Machine Learning and Human Computer Interaction.

## EDUCATION

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**University of Michigan**, Ann Arbor, MI

Ph.D. Computer Science and Engineering

Expected May 2029

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

August 2022 - May 2024

*Graduated with Summa Cum Laude*

**Shanghai Jiao Tong University**, Shanghai, China

B.S.E. Electrical and Computer Engineering (Dual Degree) Cumulative GPA: 3.83/4.00

Expected August 2024

## PUBLICATIONS

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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

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**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

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**Research Assistant in SOTA Lab**

May 2023 - Present

University of Michigan, Supervisor: Jiasi Chen, Samet Oymak

*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.
- 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**

January 2023 - December 2023

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

*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.
- 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.

## PROFESSIONAL SERVICE

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**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

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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

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

## EXTRA-CURRICULAR ACTIVITIES

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Member of *Tau Beta Pi* Engineering Honor Society