

# Anlan Zhang

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## EMPLOYMENT

**Adobe Inc**, San Jose, CA

Research Scientist/Engineer, Adobe Research

May 2025 – Present

## EDUCATION

**University of Southern California**, Los Angeles, CA

Aug. 2023 – May 2025

Ph.D. in Computer Engineering

Advisor: Prof. Feng Qian

Thesis: Optimizing Emerging Multimedia Systems: A Principled Approach to Enhancing Quality-of-Experience

**University of Minnesota – Twin Cities**, Minneapolis, MN

Aug. 2019 – Jul. 2023

M.S. in Computer Science

Advisor: Prof. Feng Qian

**Beihang University**, Beijing, China

Sept. 2015 – Jun. 2019

B.E. in Computer Science and Technology

GPA: 3.77 / 4.0, Ranking: 20 / 214

## INTERNSHIP/RESEARCH EXPERIENCE

**Graduate Research Assistant @ University of Southern California**, Los Angeles, CA

Aug. 2023 – May 2025

Supervisor: Prof. Feng Qian

**Research Scientist/Engineer Intern @ Adobe Research**, San Jose, CA

May 2024 – Aug. 2024

Mentor: Dr. Stefano Petrangeli

Project: VLM-assisted visual decomposition for design ideation.

**Research Scientist/Engineer Intern @ Adobe Research**, San Jose, CA

May 2023 – Jul. 2023

Mentor: Dr. Stefano Petrangeli

Project: Low-latency image live co-editing.

- Designed a streaming-friendly FLIF-based lossless compression algorithm for image live co-editing.
- Proposed a fast meta-adaptive context modeling approach for image live co-editing data.
- Analyzed the latency and compression ratio trade-offs of the above approaches.

**Graduate Research Assistant @ University of Minnesota**, Minneapolis, MN

Aug. 2019 – May 2023

Supervisor: Prof. Feng Qian

**Ph.D. Software Engineer Intern @ RP Core - Video, Meta**, Seattle, WA

May 2022 – Aug. 2022

Intern Manager: Dr. Chia-Yang Tsai

Project: Lossy depth image compression for holographic calling.

- Developed pre- and post- processing algorithms to improve the efficiency of depth map stream compression.
- Located and fixed bugs in the depth map compression codebase, and refined the internal design documentation.

## PUBLICATIONS

### Conference Papers

#### [SIGCOMM25] NIER: Practical Neural-enhanced Low-bitrate Video Conferencing

*Anlan Zhang, Yuming Hu, Chendong Wang, Yu Liu, Zejun Zhang, Haoyu Gong, Ahmad Hassan, Shichang Xu, Zhenhua Li, Bo Han, and Feng Qian*

In Proceedings of the ACM SIGCOMM 2025 Conference (Short Paper), 2025

#### [IROS25] Exponentially Weighted Instance-Aware Repeat Factor Sampling for Long-Tailed Object Detection Model Training in Unmanned Aerial Vehicles Surveillance Scenarios

*Taufiq Ahmed, Abbisbek Kumar, Constantino Álvarez Casado, Anlan Zhang, Tuomo Hänninen, Lauri Loven, Miguel Bordallo López, Sasu Tarkoma*

In Proceedings of the 2025 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2025), 2025

#### [MLSys25] VoLUT: Efficient Volumetric Streaming Enhanced by LUT-based Super-resolution

*Chendong Wang, Anlan Zhang, Yifan Yang, Lili Qiu, Yuqing Yang, Xinyang Jiang, Feng Qian, and Suman Banerjee*

In Proceedings of Machine Learning and Systems 7, 2025

#### [SenSys24] Boosting Collaborative Vehicular Perception on the Edge with Vehicle-to-Vehicle Communication

*Ruiyang Zhu, Xiao Zhu, Anlan Zhang, Xumiao Zhang, Jiachen Sun, Feng Qian, Hang Qiu, Z Morley Mao, and Myungjin Lee*

In Proceedings of the 22nd ACM Conference on Embedded Networked Sensor Systems, 2024

#### [MM24] An In-depth Study of Bandwidth Allocation across Media Sources in Video Conferencing

*Zejun Zhang, Xiao Zhu, Anlan Zhang, and Feng Qian*

In Proceedings of the 32nd ACM International Conference on Multimedia, 2024

**Best Student Paper Award (2/4385 = 0.05%)**

**Oral Presentation (174/4385 = 3.97%)**

#### [SIGCOMM24] Dissecting Carrier Aggregation in 5G Networks: Measurement, QoE Implications and Prediction

*Wei Ye, Xinyue Hu, Steven Sleder, Anlan Zhang, Udhaya Kumar Dayalan, Ahmad Hassan, Rostand A. K. Fezeu, Akshay Jajoo, Myungjin Lee, Eman Ramadan, Feng Qian, and Zhi-Li Zhang*

In Proceedings of the ACM SIGCOMM 2024 Conference, 2024

#### [MobiCom24] MuV<sup>2</sup>: Scaling up Multi-user Mobile Volumetric Video Streaming via Content Hybridization and Sharing

*Yu Liu, Puqi Zhou, Zejun Zhang, Anlan Zhang, Bo Han, Zhenhua Li, and Feng Qian*

In Proceedings of the 30th Annual International Conference on Mobile Computing and Networking, 2024

#### [NSDI24] Habitus: Boosting Mobile Immersive Content Delivery through Full-body Pose Tracking and Multi-path Networking

*Anlan Zhang, Chendong Wang, Yuming Hu, Ahmad Hassan, Zejun Zhang, Bo Han, Feng Qian, and Shichang Xu*

In 21st USENIX Symposium on Networked Systems Design and Implementation (NSDI 24), 2024

#### [SIGCOMM22] Vivisecting Mobility Management in 5G Cellular Networks

*Ahmad Hassan, Arvind Narayanan, Anlan Zhang, Wei Ye, Ruiyang Zhu, Shuowei Jin, Jason Carpenter, Z. Morley Mao, Feng Qian, and Zhi-Li Zhang*

In Proceedings of the ACM SIGCOMM 2022 Conference, 2022

#### [NSDI22] YuZu: Neural-enhanced Volumetric Video Streaming

*Anlan Zhang, Chendong Wang, Bo Han, and Feng Qian*

In 19th USENIX Symposium on Networked Systems Design and Implementation (NSDI 22), 2022

**[MobiCom21] EMP: Edge-assisted Multi-vehicle Perception**

Xumiao Zhang, **Anlan Zhang**, Jiachen Sun, Xiao Zhu, Y. Ethan Guo, Feng Qian, and Z. Morley Mao

In Proceedings of the 27th Annual International Conference on Mobile Computing and Networking, 2021

**[AAAI19] Perceptual-sensitive GAN for Generating Adversarial Patches**

Aishan Liu, Xianglong Liu, Jiaxin Fan, Yuqing Ma, **Anlan Zhang**, Huiyuan Xie, and Dacheng Tao

In Proceedings of the AAAI Conference on Artificial Intelligence, 2019

## Workshop Papers

**[NOSSDAV25] Alice: Low-latency Image Live Co-editing via Adaptation**

**Anlan Zhang**, Stefano Petrangeli, Haoliang Wang, Yu Shen, and Feng Qian

In Proceedings of the 35th edition of the Workshop on Network and Operating System Support for Digital Audio and Video, 2025

**[HotMobile24] The Case for Boosting Mobile Application QoE via Smart Band Switching in 5G/xG Networks**

Abmad Hassan, Wei Ye, **Anlan Zhang**, Jason Carpenter, Ruiyang Zhu, Shuowei Jin, Feng Qian, Z. Morley Mao, and Zhi-Li Zhang

In Proceedings of the 25th International Workshop on Mobile Computing Systems and Applications, 2024

**[HotMobile21] Efficient Volumetric Video Streaming through Super Resolution**

**Anlan Zhang**, Chendong Wang, Bo Han, and Feng Qian

In Proceedings of the 22nd International Workshop on Mobile Computing Systems and Applications, 2021

**[ICDEW19] Driving Big Data: A First Look at Driving Behavior via A Large-scale Private Car Dataset**

Tong Li, Ahmad Albilal, **Anlan Zhang**, Mohammad A. Hoque, Dimitris Chatzopoulos, Zhu Xiao, Yong Li, and Pan Hui

In 2019 IEEE 35th International Conference on Data Engineering Workshops (ICDEW), 2019

## Posters

**[MobiSys20] Poster: Mobile Volumetric Video Streaming Enhanced by Super Resolution**

**Anlan Zhang**, Chendong Wang, Xing Liu, Bo Han, and Feng Qian

In Proceedings of the 18th International Conference on Mobile Systems, Applications, and Services, 2020

## Preprint

**[Preprint] Zoomer: Adaptive Image Focus Optimization for Black-box MLLM**

Jiaxu Qian, Chendong Wang, Yifan Yang, Chaoyun Zhang, Huiqiang Jiang, Xufang Luo, Yu Kang, Qingwei Lin, **Anlan Zhang**, Shiqi Jiang, Ting Cao, Tianjun Mao, Suman Banerjee, Guyue Liu, Saravan Rajmohan, Dongmei Zhang, Yuqing Yang, Qi Zhang, and Lili Qiu

arXiv preprint arXiv:2505.00742

**[Preprint] A First Look at GPT Apps: Landscape and Vulnerability**

Zejun Zhang, Li Zhang, Xin Yuan, **Anlan Zhang**, Mengwei Xu, and Feng Qian

arXiv preprint arXiv:2402.15105

## HONORS AND AWARDS

**2025:** Best Research Assistant Award, Viterbi School of Engineering, University of Southern California

**2024:** ACM Multimedia 2024 Best Student Paper Award (2/4385 = 0.05%)  
**2024:** ACM Multimedia 2024 Outstanding Reviewer  
**2024:** NSDI 2024 Grant  
**2022:** ICNP 2022 Grant, NSDI 2022 Grant, MobiCom 2021 Grant  
**2019:** Outstanding Undergraduate Thesis, Beihang University, **Top 10%**

## MENTORSHIP

### University Collaborations:

Chendong Wang, University of Wisconsin – Madison, Neural-based Volumetric Video Streaming and Resource-Efficient Multimodal LLM  
 May 2023 – Present

### Interns @ Adobe Research:

Xingpeng Sun, Purdue University, Agentic Framework for Design Ideation  
 Summer 2025

## TEACHING EXPERIENCE

### University of Minnesota – Twin Cities

**CSCI 4061: Introduction to Operating Systems**, Fall 2022  
 Graduate Teaching Assistant, with Prof. Jon Weissman

## ACADEMIC SERVICES

### Conference Organizer:

ACM IoT 2024 (Publicity and Social Media Chair)

### Conference Technical Program Committee/Reviewer:

IEEE GLOBECOM 2025 (Reviewer)  
 ICCV 2025 (Reviewer)  
 IEEE/RSJ IROS 2025 (Reviewer)  
 IEEE IE 2025 (Technical Program Committee)  
 ACM WWW 2025 (Reviewer)  
 IEEE VR 2025 (Reviewer)  
 ACM ImmerCom 2024 (Technical Program Committee)  
 USENIX NSDI 2025 (Pre-Review Task Force)  
 ACM Multimedia 2024 (**Outstanding Reviewer**)  
 ACM EMS 2024 (Program Committee)  
 USENIX ATC 2024 (External Review Committee)  
 ACM WWW 2023 (Subreviewer)

### Journal Reviewer:

ACM Transactions on Sensor Networks  
 IEEE/ACM Transactions on Networking  
 IEEE Internet of Things Journal  
 IEEE Transactions on Mobile Computing  
 ACM Computing Surveys  
 IEEE Network Magazine  
 Elsevier Journal of Network and Computer Applications

### Shadow Program Committee:

ACM EuroSys 2024

ACM EuroSys 2023

**Artifact Evaluation Committee:**

USENIX FAST 2024

ACM SIGCOMM 2023

USENIX OSDI/ATC 2023

ACM EuroSys 2023

## TECHNICAL SKILLS

**Programming Languages:** C, C++, Java, Python, TypeScript, Verilog, Assembly Language

**Languages:** English, Mandarin Chinese