

# 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

### [CoNEXT25] OPCM: Opportunistic Performance-driven Connectivity Management for 5G/xG Networks

*Ahmad Hassan, Wei Ye, Anlan Zhang, Rostand A. K. Fezeu, Jason Carpenter, Ruiyang Zhu, Shuowei Jin, Myungjin Lee, Akshay Jajoo, Z. Morley Mao, Zhi-Li Zhang, Feng Qian*

In Proceedings of the 21th International Conference on Emerging Networking Experiments and Technologies, 2025

#### Best Community Award

### [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, Abhishek 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

*Ahmad 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 Alhilal, 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] Video-in-the-Loop: Span-Grounded Long Video QA with Interleaved Reasoning

*Chendong Wang, Donglin Bai, Yifan Yang, Xiao Jin, Anlan Zhang, Rui Wang, Shiqi Jiang, Yuqing Yang, Hao Wu, Qi Dai, Chong Luo, Ting Cao, Lili Qiu, Suman Banerjee*  
 arXiv preprint arXiv:2510.04022

#### [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:** ACM CoNEXT 2025 Best Community Award

**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:**

- UMass Data Science Industry Mentorship Program 2026, University of Massachusetts Amherst, Cost-awareness in LLM-based Planning Nov. 2025 – Present

- Bishwesh Khanal*, University of Jyväskylä, Master Thesis on MLLM for Actionable Aesthetic Critique and Closed-loop Image Correction Dec. 2025 – Present

- Muhammad Talha Arshad*, University of Jyväskylä, Follow-up Group Member for Doctoral Studies  
Aug. 2025 – Present

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

## **Interns @ Adobe Research:**

#### **As Primary Mentor:**

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

#### **As Co-mentor:**

- Yuzhe You, University of Waterloo, Agent-Assisted Axis-Based Exploration for Creative Design Fall 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:**

ACM MobiSys 2026 (Technical Program Committee)  
ACM MMSys 2026 (Technical Program Committee, Demos & Industry Track)  
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