

Anlan Zhang

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EMPLOYMENT

Adobe Inc, San Jose, CA

Research Scientist 1, 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, Shuwei 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] MuV²: 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

*Abmad 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, Abmad 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] 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

Bishwash 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