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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^2: 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

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

December 4, 2025