

Ran Zhu

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RESEARCH INTEREST

My research interest lies in combining AI techniques and edge computing (EdgeAI) to develop robust and trustworthy intelligent systems in a collaborative, secure, and ubiquitous manner.

EDUCATION

Delft University of Technology (TU Delft)

PhD student in Computer Science

Delft, The Netherlands

Oct 2021 – Now

Advisor: Dr. Qing Wang

University of Electronic Science and Technology of China (UESTC)

MS, Communication and Information System (ranking 1/287)

Chengdu, China

Sept 2018 – June 2021

Advisor: Dr. Zhuoling Xiao

JiLin University (JLU)

BE, Communication Engineering

Changchun, China

Sept 2014 – June 2018

PUBLICATIONS

- J. Li, **R. Zhu**, and Q. Wang “Toward TinyML-Based Robust Visible Light Positioning under Aging LEDs”, IEEE International Conference on Communications (ICC), 2026 ([CCF C](#))
- M. Yang, **R. Zhu**, Q. Wang, and J. Yang “SMoFi: Step-wise Momentum Fusion for Split Federated Learning on Heterogeneous Data”, the AAAI Conference on Artificial Intelligence (AAAI), 2026 ([CCF A/Core A*](#))
- **R. Zhu**, M. Yang, S. Wang, J. Yang, and Q. Wang “Flick: Empowering Federated Learning with Commonsense Knowledge”, the Conference in Neural Information Processing Systems (NeurIPS), 2025. ([CCF A/Core A*](#))
- X. Zhang, **R. Zhu**, R. Song, D. He, T. Yang, and Z. Xiao “LoSeVO: Local Sequence Constraints for Deep Visual Odometry”, IEEE International Symposium on Circuits and Systems (IEEE ISCAS), 2025. ([CCF C](#))
- **R. Zhu**, M. Yang, and Q. Wang “ShuffleFL: Addressing Heterogeneity in Multi-Device Federated Learning”, ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2024. ([CCF A/Core A*](#))
- M. Yang*, **R. Zhu***, Q. Wang, and J. Yang “FedTrans: Client-Transparent Utility Estimation for Robust Federated Learning”, the International Conference on Learning Representations (ICLR), 2024. (* Equal Contribution) ([Core A*](#))
- **R. Zhu**, M. Van de Abeele, J. Beysens, J. Yang, and Q. Wang “Centimeter-Level Indoor Visible Light Positioning”, IEEE Communications Magazine, 2023. ([JCR Q1](#))
- **R. Zhu**, M. Yang, J. Yang, and Q. Wang “FedNaWi: Selecting the Befitting Clients for Federated Learning in IoT Applications”, IEEE International Conference on Sensing, Communication, and Networking (IEEE SECON), 2023. ([CCF B/Core B](#))
- R. Song, **R. Zhu**, Z. Xiao, and B. Yan “ContextAVO: Local context guided and refining poses for deep visual odometry”, Neurocomputing, 2023. ([JCR Q1](#))
- **R. Zhu**, M. Yang, Q. Wang and J. Yang “FedVEM: Selecting Reliable Clients for Federated Learning”,

ACM SIGCOMM workshop on N2Women, 2022.

- **R. Zhu**, M. Yang, W. Liu, R. Song, B. Yan and Z. Xiao “*DeepAVO: Efficient pose refining with feature distilling for deep Visual Odometry*”, Neurocomputing, 2022. (**JCR Q1**)
- M. Yang, **R. Zhu**, Z. Xiao and B. Yan “*Symmetrical-Net: Adaptive Zero Velocity Detection for ZUPT-Aided Pedestrian Navigation System*”, IEEE Sensors Journal, 2021. (**JCR Q1**)
- **R. Zhu**, Z. Xiao, Y. Li, M. Yang, L. Zhou, S. Lin and H. Wen “*Efficient human activity recognition solving the confusing activities via deep ensemble learning*”, IEEE Access, 2019. (**# Citations: 100+**)
- **R. Zhu**, Z. Xiao, M. Chen, L. Zhou, S. Lin, B. Yan and H. Wen “*Deep ensemble learning for human activity recognition using smartphone*”, IEEE 23rd International Conference on Digital Signal Processing (IEEE DSP), 2018.

AWARDS AND HONORS

- Student Travel Grant (1500\$), ACM SIGCOMM 2022
- Outstanding Graduates of Sichuan Province, 2021 (top 3%)
- Outstanding Graduates of UESTC, 2021
- First Prize in the 15th China Graduate Electronics Design Contest, 2020 (top 1%)
- Excellent Postgraduate of UESTC, 2019–2021
- National Scholarship of China, 2019 (top 1%)
- First-class Academic Scholarship, 2018-2021

MENTORSHIP EXPERIENCE

- **Master Thesis:**

[Zhuoran Wang](#), TU Delft, Feb. 2025 - Nov. 2025

Thesis title: *Efficient Inference of Quantized LLMs on Edge Devices*

[Riccardo Weis](#), TU Delft, Dec. 2023-Aug. 2024

Thesis title: *Knowledge Distillation with Data Exchange for Heterogeneous Federated Learning*

- **Undergraduate Research Projects:**

Tiny Machine Learning for Embedded Systems, TU Delft, 2025

Tiny Machine Learning for 6G Networks, TU Delft, 2024

TinyML-empowered Visible Light Sensing, TU Delft, 2023

Gesture Recognition Empowered by Ambient Light and Embedded AI, TU Delft, 2022

SERVICES

- **Technical Program Committee:**

Design, Automation and Test in Europe Conference (DATE'26)

- **Reviewer for Conference:**

IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'26)

International Conference on Computer Vision (ICCV'25)

The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR'25)

- **Reviewer for Journal:**

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)

IEEE Transactions on Mobile Computing (TMC)

ACM Transactions on Sensor Network (TOSN)