Mingkun Yang

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RESEARCH INTEREST

I work on combining AI techniques and edge computing (EdgeAI) to develop privacy-preserving, training-efficient, and heterogeneity-resilient distributed learning systems, such as Federated Learning and Split Learning.

EDUCATION

- **Delft University of Technology (TU Delft)** — *Oct 2021 – Now*
  PhD student in Computer Science — Delft, The Netherlands
  Advisors: Dr. Qing Wang and Dr. Jie Yang

- **University of Electronic Science and Technology of China (UESTC)** — *Sept 2018 – June 2021*
  ME, Electronic and Communication Engineering — Chengdu, China
  Advisor: Dr. Zhuoling Xiao

- **University of Electronic Science and Technology of China (UESTC)** — *Sept 2014 – June 2018*
  BE, Internet of Things Engineering — Chengdu, China

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, *=EQUAL CONTRIBUTION

[C.1] **M. Yang**, R. Zhu, Q. Wang, and J. Yang (2025). **SMoFi: Step-wise Momentum Fusion for Split Federated Learning on Heterogeneous Data**, the 40th Annual AAAI Conference on Artificial Intelligence (AAAI) **(CCF A/Core A*)**

[C.2] R. Zhu, **M. Yang**, S. Wang, J. Yang, and Q. Wang (2025). **Flick: Empowering Federated Learning with Commonsense Knowledge**, the 39th Conference in Neural Information Processing Systems (NeurIPS) **(CCF A/Core A*)**

[C.3] **M. Yang**, R. Zhu, Q. Wang, and J. Yang (2024). **FedTrans: Client-Transparent Utility Estimation for Robust Federated Learning**, the International Conference on Learning Representations (ICLR) **(Core A*)**

[J.1] R. Zhu, **M. Yang**, and Q. Wang (2024). **ShuffleFL: Addressing Heterogeneity in Multi-Device Federated Learning**, ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) **(CCF A/Core A*)**

[C.4] T. Liu, **M. Yang**, and Q. Wang (2024). **FedReG: Recouping the Global Model in Personalized Federated Learning**, Proceedings of International Conference on Embedded Wireless Systems and Networks (EWSN) **(Core B)**

[C.5] R. Zhu*, **M. Yang***, J. Yang, and Q. Wang (2023). **FedNaWi: Selecting the Befitting Clients for Robust Federated Learning in IoT Applications**, IEEE International Conference on Sensing, Communication, and Networking (SECON) **(CCF B/Core B)**

[J.2] R. Zhu, **M. Yang**, W. Liu, R. Song, B. Yan, and Z. Xiao (2022). **DeepAVO: Efficient pose refining with feature distilling for deep Visual Odometry**, NeuroComputing **(JCR Q1)**

[J.3] **M. Yang**, R. Zhu, Z. Xiao, and B. Yan (2021). **Symmetrical-Net: Adaptive Zero Velocity Detection for ZUPT-Aided Pedestrian Navigation System**, IEEE Sensors Journal **(JCR Q1)**

[C.6] **M. Yang**, J. Liang, Z. Xiao, B. Yan, L. Zhou, S.Lin, and X.Liu (2019). **The Research of Stance-Phase Detection to Improve ZUPT-Aided Pedestrian Navigation System**, IEEE International Symposium on Circuits and Systems (IEEE ISCAS) **(CCF C)**

[C.7] Z. Guo, **M. Yang**, N. Chen, Z. Xiao, B. Yan, S. Lin and L. Zhou (2019). **LightVO: Lightweight Inertial-Assisted Monocular Visual Odometry with Dense Neural Networks**, IEEE Global Communications Conference (IEEE GLOBECOM) **(CCF C)**

[J.4] R. Zhu, Z. Xiao, Y. Li, **M. Yang**, L. Zhou, S. Lin and H. Wen (2019). **Efficient human activity recognition solving the confusing activities via deep ensemble learning**, IEEE Access, 2019.

SERVICES

- AAAI Conference on Artificial Intelligence, Reviewer, 2025
- International Conference on Learning Representations (ICLR), Reviewer, 2025
- IEEE Transactions on Parallel and Distributed Systems (TPDS), Reviewer, 2024
- IEEE Communications Magazine, Reviewer, 2024, 2025
- ACM International Conference on Web Search and Data Mining (WSDM), Reviewer, 2022

Honors and Awards

- Student Travel Grant, ACM EWSN 2024
- Outstanding graduates of Sichuan province (2021)
- Outstanding graduates of UESTC (2021)
- First-class academic scholarship $\times$ 2 (2019-2020)
- Outstanding Student Awards of UESTC $\times$ 2 (2019-2020)
- The *Inspur* scholarship (2020)
- Gold award in *China Graduate Electronics Design Contest* (Top 1%) (2020)
- Silver award in *China Graduate Electronics Design Contest* (Southwest district competition) (2020)
- People scholarship of UESTC $\times$ 4 (2015-2018)

Mentorship Experience

- **Master Thesis:**
  - Lejun Hu, TU Delft, Jul. 2025, Thesis title: Split Inference of Transformer
  - Tianyi Liu, TU Delft, Nov. 2023, Thesis title: Federated Learning with Rebalanced Dataset
- **Undergraduate Research Projects:**
  - TU Delft, 2024, Project topic: Tiny Machine Learning for 6G Networks
  - TU Delft, 2023, Project topic: TinyML-empowered Visible Light Sensing
  - TU Delft, 2022, Project topic: Gesture Recognition Empowered by Ambient Light and Embedded AI