Haochen Zhao
Ph.D. Candidate, Computer Science – UCLA
Wireless · Applied AI · Digital Twin · Edge Systems
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Education

UC Los Angeles (UCLA)
Ph.D. Computer Science (Jan 2024 – Present)
M.S. Electrical & Computer Engineering (Sept 2022 – Dec 2023)

Shanghai Jiao Tong University (SJTU)
B.Eng. Information Engineering, Minor in CS (Sept 2018 – Jun 2022)
- Ranked *1 / 140*, GPA 90.6 / 100

Experience

Research Intern @ Microsoft Research Asia (Shanghai) (Jun 2025 – Sept 2025)
On Intelligent Wearables with advisor Prof. Lili Qiu
- Built low-power UWB & bio-electric sensing prototypes with 4h+ battery life.
- Led multi-subject data collection and ML data workflow.
- Coordinated cross-institute evaluation for chronic-disease early detection.

Graduate Researcher @ UCLA ICON Lab (Oct 2022 – Present)
On Wireless Communication and sensing with advisor Prof. Omid Abari
- Designed passive beamforming method improving RFID RSSI by ~4 dB.
- Developed privacy-preserving workplace sensing prototype, verified at Amazon warehouse.
- Published in *IEEE Sensors Journal* (2024); SenSys paper under final revision.

Undergraduate Researcher @ SJTU Optical Comm Group (Sept 2020 – Jun 2022)
On optical digital twin with advisor: Prof. Lilin Yi
- Implemented CUDA-accelerated simulator for long-haul fiber transmission.
- Built ML model for nonlinearity modelling and compensation with 10x speedup.
- Co-authored 3 papers in *J. Lightwave Technology* and *Optics Express*.

Selected Publications

- *H. Zhao* et al., "Deform to Inform: Persistent Batteryless Sensing via Antenna Deformation," *SenSys 2026* (camera ready pending).
- *H. Zhao* et al., "A Passive Back Posture Monitoring System Using Orthogonal RFID Design," *IEEE Sensors Journal*, 2024. [link](#)
- H. Yang, *H. Zhao* et al., "Low-complexity Full-field Ultrafast Nonlinear Dynamics Prediction," *Optics Express*, 2022. [link](#)
- H. Yang, Z. Niu, *H. Zhao* et al., "Fast and Accurate Waveform Modeling of Long-Haul Multi-Channel Optical Fiber Transmission Using a Hybrid Model-Data Driven Scheme" Journal of Lightwave Technology, 2022. [link](#)

Skills

Programming: Python, C/C++, MATLAB, Verilog
AI/ML: PyTorch, TensorFlow, data augmentation, GPU programming
Wireless/Hardware: ADS, HFSS, RF test & measurement, MCU prototyping
Soft: Technical writing, collaboration, rapid prototyping