Keru Chen

Ph.D. Student, Electrical Engineering, Arizona State University

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PROFILE

First-year Ph.D. student in Electrical, Computer, and Energy Engineering at Arizona State University. My research focuses on **reinforcement learning**, **large language models**, and their applications to **healthcare and robotics**, with particular interest in safe and efficient offline-to-online reinforcement learning and constrained decision-making.

EDUCATION

Arizona State University **2025 – Present**
Ph.D. in Electrical Engineering *GPA: 3.89 / 4.00*

- Advisor: **Prof. Shaofeng Zou**

Xi'an Jiaotong University **2021 – 2025**
B.Eng. in Automation *GPA: 3.5 / 4.3*

PUBLICATIONS

- **Chen, K.**, Wei, H., Deng, Z., and Lin, S. MARVEL: Accelerating Safe Online Reinforcement Learning with Finetuned Offline Policy. *Transactions on Machine Learning Research (TMLR)*, 2026.
- Xu, F., Wu, Z., Tan, C., Liao, Y., Wang, Z., **Chen, K.**, and Pan, A. Fourier Ptychographic Microscopy 10 Years On: A Review. *Cells*, 13(4), 2024.

RESEARCH EXPERIENCE

University of Houston **Sep 2023 – Present**
Research Intern

- Conducted research on safe offline-to-online reinforcement learning and constrained RL under the supervision of **Prof. Sen Lin**.
- First-author paper published at *Transactions on Machine Learning Research (TMLR)*.

Westlake University **Jul 2024 – Present**
Research Intern

- Worked on reinforcement learning for real-world robotic manipulation under the supervision of **Prof. Donglin Wang**.
- Applied RL-based fine-tuning to vision-language-action models for robotic control.

University of North Carolina at Chapel Hill **Jan 2024 – May 2024**
Research Intern

- Collaborated with **Prof. Tianlong Chen** on time-series forecasting and security analysis of LLM and RAG systems.
- Contributed to work published at *EMNLP 2024*.

Chinese Academy of Sciences **Feb 2023 – Oct 2023**
Research Intern *Xi'an, China*

- Worked on computational imaging and Fourier ptychographic microscopy under the supervision of **Prof. An Pan**.
- Co-authored a review article published in *Cells* (JCR Q1).

SELECTED PROJECTS

Waveformer: Transformer-based EEG Sleep Stage Classification **2023**
Research Project

- Developed a transformer-based model combining wavelet transforms and deep learning for EEG sleep stage classification.
- Achieved top performance within the course dataset; code publicly available on GitHub.

Biomedical Image Translation with GANs **2024**
Research Project

- Designed a multi-scale GAN for breast cancer cell image translation.
- Awarded National Second Prize at the National Biomedical Engineering Innovation Design Competition.

SKILLS

Programming: Python (PyTorch), C/C++, MATLAB

Tools: Git/GitHub, Linux, LaTeX

Languages: Mandarin (Native), English (Fluent; IELTS 6.5)