Lesley (Yajie) Zhou

Ph.D. Candidate in Computer Science
University of Maryland, College Park

lesleychou339@gmail.com lesleychou.github.io

Last updated: January 2026

Research Interests

AI for System Operations; Self-driven Network and Systems; Reliability of AI Agents in Systems.

Education

University of Maryland, College Park **2023 – Present**
PhD in Computer Science
Advisor: Prof. Zaoxing (Alan) Liu

Boston University **2021 – 2023**
PhD in Computer Engineering
Advisor: Prof. Zaoxing (Alan) Liu

Korea Advanced Institute of Science and Technology (KAIST) **2020**
M.S. in Electrical Engineering
Advisors: Prof. Yung Yi, Prof. Dongsu Han

Xidian University **2018**
B.E. in Computer Science and Technology
Bachelor Dissertation Award: Top 1% in CS Department

Research Experience

Carnegie Mellon University, CyLab *Oct 2025 – Present*
Visiting Researcher
Host: Prof. Vyas Sekar

Microsoft Research (Redmond, WA) *May – Aug 2025*
Research Intern
Focus: Synthesizing Log Alerting Rules with LLMs

Microsoft Research (Redmond, WA) *May – Aug 2024*
Research Intern
Focus: Build AI Agents for Network Management

Microsoft Research (Redmond, WA) *May - Aug 2023*
Research Internship
AI-driven Network Operations; Zero Trust Cloud Security

Publications

Conference Papers

1. NetArena: Dynamically Generated LLM Benchmarks for Network Applications
   Yajie Zhou, *Jiajun Ruan, Eric S. Wang, Sadjad Fouladi, Francis Y. Yan, Kevin Hsieh, Zaoxing Liu*
   International Conference on Learning Representations (ICLR), 2026

2. Tidal: Tackling Concept Drift in Provenance-based Advanced Persistent Threats Detection
   Yajie Zhou, *Nengneng Yu, Tuo Zhao, Zaoxing Liu*
   New Ideas in Networked Systems (NINeS), 2026

3. PrvTel: Lightweight Models for Private and Accurate Telemetry Data Retention
   Yajie Zhou, *Fuheng Zhao, Eric Wang, Ayse Coskun, Divyakant Agrawal, Amr El Abbadi, Zaoxing Liu*
   USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2026

4. MeshAgent: Enabling Reliable Network Management with Large Language Models
   Yajie Zhou, *Kevin Hsieh, Sathiya Kumaran Mani, Srikanth Kandula, Zaoxing Liu*
   ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Systems, 2026

5. Securing Public Cloud Networks with Efficient Role-based Micro-Segmentation
   Sathiya Kumaran Mani, Kevin Hsieh, Santiago Segarra, Ranveer Chandra, ***Yajie Zhou****, Srikanth Kandula*
   USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2025

6. Towards Interactive Research Agents for Internet Incident Investigation
   Yajie Zhou*, Nengneng Yu*, Zaoxing Liu* *(*equal contribution)*
   ACM Workshop on Hot Topics in Networks (HotNets), 2023

7. Enhancing Network Management Using Code Generated by Large Language Models
   Sathiya Kumaran Mani, ***Yajie Zhou****, Kevin Hsieh, Santiago Segarra, Trevor Eberl, Eliran Azulai, Ido Frizler, Ranveer Chandra, Srikanth Kandula*
   ACM Workshop on Hot Topics in Networks (HotNets), 2023

8. Genet: Automatic Curriculum Generation for Learning Adaptation in Networking
   Zhengxu Xia,* ***Yajie Zhou****, Francis Y. Yan, Junchen Jiang* *(*equal contribution)*
   ACM SIGCOMM Conference, 2022

PATENT

- Sathiya Kumaran Mani, **Yajie Zhou**, Kevin Hsieh, Santiago Segarra, Ranveer Chandra, Srikanth Kandula. 2023. "Graph Analysis and Manipulation."
  US Patent Application MS#413451-US-NP, registered January 2025.

- **Yajie Zhou**, Kasim Te. 2020. "Method and Apparatus for Transmitting Video Data."
  Korean Patent Application 10-2020-0141018, registered October 2020.

Honors and Awards

- **KAUST Rising Stars in AI Symposium 2026** (top 6%) 2026

- **N2Women Young Researcher Fellowship** 2022
- **CRA-WP Grad Cohort for Women** 2022

Professional Service

Conference Service

- **SIGMETRICS 2026** – Shadow Program Committee Member
- **EuroSys 2026** – Shadow Program Committee Member
- **HotNets 2025** – Web Chair
- **Sensors S&P Workshop 2025** – Technical Program Committee Member

Community Service

- **N2Women Young Researcher Workshop 2023** – Event Host
  Connected mentors from academia and industry with female PhD students and postdocs to share career development advice

Teaching Experience

Boston University **Fall 2022, Spring 2023**
Teaching Assistant – Introduction to Networking (EC441)

Technical Skills

Programming Languages: Python, C++, JavaScript, LaTeX
Machine Learning: PyTorch, TensorFlow, Keras, LangChain, Hugging Face
Systems & Tools: Docker, Git, Linux, AWS, Azure
Development: Emacs, PyCharm, Visual Studio Code