FAN (GABRIELLA) XUE

Website: gabriellaxue.github.io
Email: fanxue2@illinois.edu

RESEARCH INTERESTS

Satellite Networks, Traffic Engineering, Scalability and Efficiency of Networked Systems, Datacenter Networks, Internet of Things

EDUCATION

PhD in Computer Science, University of Illinois at Urbana-Champaign *Aug. 2023 - Present*
Advised by Professor Matthew Caesar

MS in Computer Science, University of Illinois at Urbana-Champaign *Aug. 2023 - Aug. 2024*
Masters Thesis: *A Metaverse for the Internet of Things*
Advised by Professor Matthew Caesar

BS in Computer Science, University of Illinois at Urbana-Champaign *Aug. 2018 - May 2023*
High Honor

PUBLICATIONS

Vivisecting Starlink Throughput: Measurement and Prediction. Zikun Liu, <u>Fan Gabriella Xue</u>, Sarah Tanveer, Deepak Vasisht. To appear in *Proceedings of the 21st International Conference on Emerging Networking Experiments and Technologies (To appear in CoNEXT'25).*

Towards Immersive Cloud-Based IoT Education. <u>Fan Gabriella Xue</u>, Matthew Caesar. *ACM SIGCOMM Computer Communication Review (CCR 2024).*

RESEARCH IMPACT

IoT Virtuaization Platform

· Develop a distributed platform that makes use of virtualization and extended reality techniques to provide users with immersive, hands-on experimentation and intuition to the process of learning and adopting CI frameworks. The current system is deployed to more than 600 students from the University of Illinois Urbana-Champaign (US), Cardiff University (UK), and Augustana College (US), as well as tens of high schools (US).

WORK EXPERIENCE

Bytedance May 2025 - August 2025
Network R&D Intern *Bellevue, WA*

· Worked on handling hyperscale traffic for the internet gateway in the data center network.
· Set up ByteDance's virtual networking infrastructure in a customized test cluster to collect performance metrics.

Accelerated Learning and Engineering Research Training Program May 2023 - Dec. 2023
Research Mentor *Urbana, IL*

· Advised two undergraduate students on research in IoT systems, guiding them in methodology and experiment design, results analysis, and fostering team collaboration.

C3.ai May 2023 - Aug. 2023
Software Engineering Intern *Redwood City, CA*

· Designed, implemented, and tested anomaly detection components in the sourcing optimization application from end to end.

C3.ai May 2022 - Aug. 2022
Software Engineering Intern *Redwood City, CA*

· Built the ESG app CSO persona from scratch that unifies fragmented ESG data, identifies priority issues, tracks progress against goals, and automates reporting aligned to key standards.

Marqeta June 2021 - July 2021
Software Engineering Intern *Oakland, CA*

· Built a NACHA file viewer endpoint to decrypt/encrypt and parse information for both technical and non-technical users to verify/download transaction content in a human-readable format securely, and simplified SFTP uploading via endpoints.

TEACHING EXPERIENCE

CS425 Teaching Assistant Fall 2025

· Held office hours and answered questions on distributed systems.

CS437 Teaching Assistant Spring 2023 & 2025

· Held office hours and answered questions on topics related to the Internet of Things.
· Managed the deployment and maintenance of the virtual lab infrastructure for 200 students.

CS341 Teaching Assistant Fall 2024

· Lectured weekly lab sections and answered questions on system programming.

CS225 Teaching Assistant Fall 2022

· Held office hours and lab sections to teach and answer questions on data structures.
· Named to the *List of Teachers Ranked as Excellent by Their Students*.

AWARDS AND ACTIVITIES

· NSDI 2025 Travel Grant
· Sysnet Woman Student Organizer (2024)
· List of Teachers Ranked as Excellent by Their Students (2022)
· Usenix Student Grant Program (OSDI 2022)
· Fall SoS Quarterly Lablet Meeting Student Contributor (2021)
· Yunni and Maxine Pao Memorial Scholarship (2021-2022)
· TBP Outstanding Junior Awards (2021)
· Student volunteer in SIGCOMM (2021)
· Illinois Engineering Achievement Scholarship (2021)
· James Scholar (2018-2022)

PROGRAMMING LANGUAGES

· **Advanced: Python**
· **Intermediate: Java, C++, C, JavaScript, HTML, CSS, SQL**