

# FAN (GABRIELLA) XUE

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## RESEARCH INTERESTS

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

## EDUCATION

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**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

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

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

## RESEARCH IMPACT

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### IoT Virtualization 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

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**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**

*Software Engineering Intern*

May 2022 - Aug. 2022

*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**

*Software Engineering Intern*

June 2021 - July 2021

*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**

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### **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**

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- 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**

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