

# ZHENGJIE JI

Ph.D. Student, Department of Computer Science, Virginia Tech

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## RESEARCH INTERESTS

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I am a Ph.D. student in the Computer Science Department at Virginia Tech, advised by Prof. Dan Williams. My research focuses on operating systems, with an emphasis on extended Berkeley Packet Filter (eBPF) and verification techniques. Currently, I am working on generalizing the eBPF verifier to enhance the reliability and correctness of operating system components.

## EDUCATION

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Ph.D. in Computer Science, Virginia Tech	2022 - present
M.S. in Computer Science and Engineering, KTH Royal Institute of Technology	2020 - 2023
B.E. in Electrical and Computer Engineering, Shanghai Jiao Tong University	2017 - 2021

## HONORS AND AWARDS

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Bitshares Fellowship, Virginia Tech	2023
CCI SWVA Cyber Innovation Scholarship, Virginia Tech	2023
KTH Covid-19 Financial Aid Scholarship, KTH Royal Institute of Technology	2021
Hattrick Award, KTH Royal Institute of Technology	2020

## PUBLICATIONS

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### CONFERENCE PAPERS

- [Eliminating eBPF Tracing Overhead on Untraced Processes](#)  
Milo Craun, Khizar Hussain, Uddhav Gautam, [Zhengjie Ji](#), Tanuj Rao, Dan Williams. *Workshop on eBPF and Kernel Extensions*, 2024.
- [How well does LLM generate security tests?](#)  
Ying Zhang, Wenjia Song, [Zhengjie Ji](#), Daphne Yao, Na Meng. *CoRR arXiv*, 2023.
- [PrivMon: A Stream-Based System for Real-Time Privacy Attack Detection for Machine Learning Models](#)  
Myeongseob Ko, Xinyu Yang, [Zhengjie Ji](#), Hoang Anh Just, Peng Gao, Anoop Kumar, Ruoxi Jia. *International Symposium on Research in Attacks, Intrusions and Defenses*, 2023.
- [ThreatKG: A System for Automated Open-Source Cyber Threat Knowledge Gathering and Management](#)  
Peng Gao, Xiaoyuan Liu, Edward Choi, Sibom Ma, Xinyu Yang, [Zhengjie Ji](#), Zilin Zhang, Dawn Song. *CoRR arXiv*, 2022.
- [A Hybrid Queuing Model for Coordinated Vehicle Platooning on Mixed-Autonomy Highways: Training and Validation](#)  
Haoran Su, [Zhengjie Ji](#), H. Johansson, Li Jin. *CoRR arXiv*, 2021.

### DEMO PAPERS

- [A Knowledge Base Question Answering System for Cyber Threat Knowledge Acquisition](#)  
[Zhengjie Ji](#), Edward Choi, Peng Gao. *IEEE International Conference on Data Engineering*, 2022.

### POSTERS

- [Poster: ThreatKG - A System for Automated Cyber Threat Knowledge Gathering and Management](#)  
[Zhengjie Ji\\*](#), Xiaoyuan Liu\* (\* equal contribution), Edward Choi, Sibom Ma, Xinyu Yang, Dawn Song, Peng Gao. *IEEE Symposium on Security and Privacy*, 2023.

## PROFESSIONAL SERVICES

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External Reviewer, <i>Journal of Complex Networks</i>	2023
External Reviewer, <i>IEEE Transactions on Dependable and Secure Computing</i>	2023
External Reviewer, <i>ACM Conference on Computer and Communications Security</i>	2023
Conference Volunteer, <i>ACM Conference on Computer and Communications Security</i>	2022

## TEACHING EXPERIENCE

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Teaching Assistant, CS2114 Software Design and Data Structures, Virginia Tech	2024
Teaching Assistant, CS5560 Fundamentals of Info Security, Virginia Tech	2024
Teaching Assistant, CS5594 Blockchain Technologies, Virginia Tech	2023
Teaching Assistant, VE492 Intro to Artificial Intelligence, Shanghai Jiao Tong University	2021

## SKILLS

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Languages: English / Mandarin  
Programming: C / C++ / Rust / Python / Java / JavaScript / SQL  
Technical Experience: eBPF / QEMU / Docker / Kubernetes / PostgreSQL / Neo4j / Elasticsearch / Splunk

## ENTRACURRICULAR ACTIVITIES

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President, Shanghai Jiao Tong University Small Animal Protection Association (SJTUSAPA)	2018 - 2020
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