

EDUCATION

Department of Computer Science, Virginia Tech <i>Ph.D. in Computer Science</i>	VA, United States 2024 - present
<ul style="list-style-type: none">• Advisor: Dr. Peng Gao• Research area:<ul style="list-style-type: none">– Automated and AI-assisted security operations (SecOps)– LLM/MLLM specialization and customization– Agentic planning, reasoning, and learning	
School of Software Engineering, Beijing Jiaotong University <i>B.E. in Software Engineering</i>	Beijing, China 2018 - 2022

PUBLICATIONS

1. **Yutong Cheng**, Osama Bajaber, Saimon Tsegai, Dawn Song, Peng Gao. CTINEXUS: Automatic Cyber Threat Intelligence Knowledge Graph Construction Using Large Language Models. *In Proceedings of the 10th IEEE European Symposium on Security and Privacy, (Euro S&P)*, 2025.

2. **Yutong Cheng**, Haowen Yang, Zhengda Li, and Lei Tian. Characterizing, Detecting, and Correcting Comment Errors in Smart Contract Functions. *IEEE International Conference on Software Services Engineering (SSE)*, 2024.

3. Junjielong, Xu and Qiuai, Fu and Zhouruixing, Zhu and **Yutong, Cheng** and Zhijing, Li and Yuchi, Ma and Pinjia, He. Hue: A user-adaptive parser for hybrid logs. *Proceedings of the 31st ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)*, 2023.

INTERNSHIPS & EXPERIENCE

Llama Family Algorithm Developer	2023.09 - 2023.12
<ul style="list-style-type: none">• Fine-tuned Llama2-Chat model with Chinese datasets to enhance Chinese conversational abilities.• Integrated LangChain framework to improve model performance in Chinese applications.	
AtomEcho Algorithm Developer	2023.06 - 2023.09
<ul style="list-style-type: none">• Developed a framework (AtomTool) for integrating tool utilization skills into LLMs.• Implemented API integrations to enhance LLM's tool usage capability, improving LLM accuracy in handling complex API parameter settings.• Reduced the hallucination phenomenon by refining prompt design and retrieval methods, improving LLM response accuracy and reliability.	
Chinese University of Hong Kong Research Assistant	2022.09-2023.06
<ul style="list-style-type: none">• Collaborated with a cloud company to collect and curate log data from multiple departments, enabling comprehensive log analysis.• Developed a two-step log grouping algorithm combining coarse- and fine-grained techniques, utilizing a multinomial search tree for efficient template extraction.• Designed a template updating mechanism that incorporated human feedback to resolve ambiguous tokens, enhancing overall system accuracy.	
Yuewen Group, Tencent Backend Developer	2020.06 - 2020.09
<ul style="list-style-type: none">• Developed dynamic UI customized to user interests, integrating real-time content recommendation statistics.• Created responsive framework to adjust interface content based on user click feedback.	

AWARDS & HONORS

• Bitshares Fellowship, for smart-contract-related research project	2024.09
• Virginia Tech CS Departmental Travel Grant	2024.06
• CCI SWVA Cyber Innovation Scholarship, for CTI-related research project	2024.03

PROFESSIONAL SERVICES

- **Student Organizer**, for the 2024 DMV Security Workshop.
- **External Reviewer**, for CCS, DLSP, TOPS, Euro S&P, S&P, KDD, Asia CCS, NDSS