Yutong Cheng

(+1) 540-666-1970
yutongcheng@vt.edu
ccsnow127.github.io

Education

Department of Computer Science, Virginia Tech VA, United States
Ph.D. in Computer Science 2024 - *present*

- GPA: 3.85
- Research area: Application and customization of LLMs into knowledge-intensive and complex applications in security and software engineering

School of Software Engineering, Beijing Jiaotong University Beijing, China
B.E. in Software Engineering 2018 - 2022

- GPA: 3.23

Publications

1. **Yutong Cheng**, Osama Bajaber, Dawn Song, Peng Gao. CTINEXUS: Unleash Cyber Threat Intelligence via In-Context Learning of Large Language Models. *Under peer review*, 2024.

2. Xu, Junjielong and Fu, Qiuai and Zhu, Zhouruixing and **Cheng, Yutong** and Li, Zhijing and Ma, Yuchi and He, Pinjia. 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 | Beijing, China 2023.07 - 2023.12

- Fine-tuned Llama2-Chat model with Chinese datasets to enhance Chinese conversational abilities.
- Integrated LangChain framework to improve model performance in Chinese applications.

AtomEcho | Beijing, China 2022.09 - 2023.12

- 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.

PaaS Lab, Huawei | Shenzhen, China 2020.06 - 2020.12

- Collected and curated hybrid log data from multiple departments in Huawei Cloud for log analysis.
- Implemented a two-step log grouping algorithm using coarse- and fine-grained techniques with a multinomial search tree for efficient template extraction.
- Designed a template updating mechanism to integrate human feedback to resolve ambiguous tokens.

Yuewen Group, Tencent | Beijing, China 2020.06 - 2020.09

- 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 NDSS 2025, ACM CCS 2024, DLSP 2024, TOPS 2023, IEEE EuroS&P 2024