Zhihan GUO

Curriculum Vitae

Shatin, New Territories, HK SAR
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🖑 *https://zhihan-guo.github.io/*
Research Interests
Natural language processing, LLM, RAG

Education

2022–Present	**The Chinese University of Hong Kong**, *PhD, Computer Science and Engineering.*
2021–2022	**The University of Hong Kong**, *MSc, Finance in Financial Technology.*
2017–2021	**Beijing Institute of Technology**, *BSc, Computer Science and Technology.*
2018	**The University of Cambridge and The University of Oxford**, *Academic Visiting, Homerton International and Technology Innovation Programme.*

Research Publications

2024	**FedLFC: Towards Efficient Federated Multilingual Modeling with LoRA-based Language Family Clustering.**, *NAACL'24, Zhihan Guo, Yifei Zhang, Zhuo Zhang, Zenglin Xu, Irwin King.*
2024	**FedHLT: Efficient Federated Low-Rank Adaption with Hierarchical Language Tree for Multilingual Modeling.**, *WWW'24, Zhihan Guo, Yifei Zhang, Zhuo Zhang, Zenglin Xu, Irwin King.*

Research Experiences

Oct 2023 – Present — **Retrieval Augmented Multimodal Fact-checking**, *CUHK.*
We propose an end-to-end retrieval augmented multimodal fact-checking and explanation generation system.

Aug 2020 – Jun 2021 — **Enterprise Reputation Evaluation System**, *(National Key Support Project), Project granted by Institute of Software Intelligence and Software Engineering, Beijing Institute of Technology and Public Meteorological Service Center of China Meteorological Administration.*
Proposed an enterprise reputation evaluation algorithm oriented to quantitative indicators and a company reputation evaluation algorithm oriented to user reviews. And based on the proposed algorithms, researched and built a comprehensive enterprise reputation evaluation system to realize the automated evaluation of corporate reputation in the meteorological industry.

Feb 2018 – Jul 2020 — **Android System Fuzz Testing Project**, *Project granted by Laboratory of Information Security and Countermeasures Technology, Beijing Institute of Technology.*
Developed the hierarchical acquisition method of Android system service information, and published a paper as first author. Designed the state-guided Android system fuzz testing method, and developed the SGFDefender fuzz testing tool, and started an entrepreneurial project as the person in charge.

Dec 2018 – Apr 2019 — **Web Vulnerability Scanning Software Development**, *Project granted by Laboratory of Information Security and Countermeasures Technology, Beijing Institute of Technology.*
Evaluated 6 existing vulnerability scanning software; built Damn Vulnerable Web Application (DVWA) platform under Linux Kali operating system virtual machine environment, tested Burp Suite and OWASP ZAP software; compared the performance of different scanners under the low, medium and high modes of DVWA.

Feb 2018 – Jul 2019 — **Assessment Methods of Information Security Awareness**, *(National '242' Projects), Project granted by Laboratory of Information Security and Countermeasures Technology, Beijing Institute of Technology.*
Used Python crawler technology to collect a number of texts on social media; used large-scale and machine learning technologies and sentiment analysis method to build the information security awareness assessment model of the Chinese public.