Yue Xue (薛岳)

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https://bradmoonuestc.github.io/

https://github.com/BradMoonUESTC

https://scholar.google.com/citations?user=6cdLQQQAAAAJ

SUMMARY

- Senior Security Engineer focused on blockchain security, software security, and LLM applications in security.

- Experienced in smart contract auditing, static analysis, formal verification, and on/off-chain monitoring systems.

- Awards: NDSS 2025 Distinguished Paper Award; ACM SIGSOFT Distinguished Paper Award (FSE 2024); Secure3 Rank #2 (total bounty USD 68,570).

EDUCATION

Guangzhou University (GZHU)   2020.09 – 2023.06
M.S. in Computer Technology (Academician Fang Binxing Class)
· Research: blockchain security, smart contract security, LLM for security

University of Electronic Science and Technology of China (UESTC)   2011.09 – 2015.06
B.E. in Electrical Engineering and Automation
· Focus: electrical engineering, automatic control, and core engineering coursework

SKILLS

Security	Smart contract auditing, static analysis, formal verification, on-chain monitoring
LLM	RAG, prompt engineering, evaluation frameworks, LLM-assisted security workflows
Stack	Solidity, Python, C#, Slither, Foundry, Hardhat, Linux

EXPERIENCE

CertiK   2025.11 – Present
Senior Security Engineer
· Leading AI vulnerability scanning engine development

OKX   2022.04 – 2022.10, 2024.05 – 2025.11
Senior Security Engineer
· Led a 4-person team to build internal contract security monitoring (state and transaction anomaly detection)
· Designed and maintained the internal contract management platform and privileged-task framework; delivered safe privilege migration with zero incidents
· Built AML monitoring for CeFi deposits and wallet transactions; continuously improved black-fund detection and interception
· Conducted smart contract auditing and security tooling development

MetaTrust   2022.10 – 2025.08
Security Supervisor / Consultant
· Led smart contract audits and engagement coordination; improved audit workflows
· Developed 60+ Slither detectors and optimized nearly 100 rules; reduced false positives below 25%
· Contributed to GPTScan and independently built PropertyGPT for formal verification
· Collaborated with NTU research teams and co-authored papers

C# Developer   2016.12 – 2019.01
· Built full-stack web features and maintained databases
· Developed and maintained enterprise systems

PROJECTS & TOOLS

LLM4Sec Audit Tools   Ongoing
End-to-end audit toolchain
· Code Audit Hinter (IDE security plugin, 37 stars, 2025.03–Present): RAG-powered audit hints for VSCode and Cursor
· Finite Monkey Engine (335 stars, 2024.04–Present): task-driven LLM audit engine with practical precision/recall
· AI Audit Result Evaluator (private, 2025.05–Present): automated judging for contest findings vs. ground truth
· Code Semantic Search (private, 2024.12–Present): LLM-based codebase understanding and retrieval

Falcon   2022.12 – 2024.05
Enhanced Solidity static analysis framework
· Extended Slither with dozens of new detectors and improved precision
· Supports DeFi price manipulation, centralization risk, and complex logic bug detection

Auditing & Competitions   Ongoing
Secure3 track
· Secure3 Rank #2, total bounty USD 68,570

PUBLICATIONS

1. Y. Sun, D. Wu, **Yue Xue**, H. Liu, H. Wang, Z. Xu, X. Xie, Y. Liu. "GPTScan: Detecting Logic Vulnerabilities in Smart Contracts by Combining GPT with Program Analysis." Proc. ICSE, 2024.

2. Y. Sun, D. Wu, **Yue Xue**, H. Liu, W. Ma, L. Zhang, Y. Liu, Y. Li. "LLM4Vuln: A Unified Evaluation Framework for Decoupling and Enhancing LLMs' Vulnerability Reasoning." arXiv preprint arXiv:2401.16185, 2024.

3. W. Ma, D. Wu, Y. Sun, T. Wang, S. Liu, J. Zhang, **Yue Xue**, Y. Liu. "Combining Fine-Tuning and LLM-based Agents for Intuitive Smart Contract Auditing with Justifications." Proc. ICSE, 2025.

4. Y. Liu, **Yue Xue**[*], D. Wu, Y. Sun, Y. Li, M. Shi, Y. Liu. "PropertyGPT: LLM-driven Formal Verification of Smart Contracts through Retrieval-Augmented Property Generation." NDSS, 2025.

5. K. Li, **Yue Xue**, S. Chen, H. Liu, K. Sun, M. Hu, H. Wang, Y. Liu, Y. Chen. "Static Application Security Testing (SAST) Tools for Smart Contracts: How Far Are We?" Proc. ACM Softw. Eng. (FSE), 1, 1447–1470, 2024.

6. **Yue Xue**, J. Fu, S. Su, Z. A. Bhuiyan, J. Qiu, H. Lu, N. Hu, Z. Tian. "Preventing Price Manipulation Attack by Front-Running." Proc. AAIS, 309–322, 2022.

7. M. Xie, M. Hu, Z. Kong, C. Zhang, Y. Feng, H. Wang, **Yue Xue**, H. Zhang, Y. Liu, et al. "DeFort: Automatic Detection and Analysis of Price Manipulation Attacks in DeFi Applications." Proc. ISSTA, 2024.

8. **Yue Xue**, D. Fan, S. Su, J. Fu, N. Hu, W. Liu, Z. Tian. "A Review on the Security of the Ethereum-Based DeFi Ecosystem." CMES–Computer Modeling in Engineering & Sciences, 139(1), 2024.

9. S. Su, Y. Tan, **Yue Xue**, C. Wang, H. Lu, Z. Tian, C. Shan, X. Du. "Detecting Smart Contract Project Anomalies in Metaverse." Proc. IEEE MetaCom, 2023.

10. Z. Kong, C. Zhang, M. Xie, M. Hu, **Yue Xue**, Y. Liu, H. Wang, Y. Liu. "Smart Contract Fuzzing Towards Profitable Vulnerabilities." Proc. ACM Softw. Eng. (FSE), 2, 153–175, 2025.

11. S. Su, **Yue Xue**, L. Lin, C. Wang, H. Lu, J. Qiu, Y. Sun, Y. Liu, Z. Tian. "Smart Contract Firewall: Protecting the On-Chain Smart Contract Projects." Proc. IEEE GLOBECOM, 5122–5128, 2023.

12. Y. Sun, S. Ding, L. Tan, **Yue Xue**, B. Li, C. Huang, S. Xiong. "Beyond Stars and Commits: A Fair and Manipulation-Resistant Framework for Measuring Developer Contributions." Proc. ACM FSE Companion, 2025.

13. **Yue Xue**, et al. "Understanding Codebase like a Professional! Human–AI Collaboration for Code Comprehension." Proc. ICPC, 2026 (accepted).

[*] Co-first author.

ACADEMIC SERVICE

- Reviewer: IEEE Transactions on Software Engineering (TSE); ACM Transactions on Software Engineering and Methodology (TOSEM); ACM Transactions on Privacy and Security (TOPS)

AWARDS

- NDSS 2025 Distinguished Paper Award: PropertyGPT

- ACM SIGSOFT Distinguished Paper Award (FSE 2024): SAST Tools for Smart Contracts

- Secure3 Rank #2 (total bounty USD 68,570)