Wenbo Guo

(+86) 13258285996 | honywen@stu.scu.edu.cn | github.com/lxyeternal | about.honywen.com

ABOUT

A graduate student at the School of Cyberspace Security of Sichuan University. My research is in the area of vulnerability detection and privacy protection. Related research is published in JIFS, DSN journals and RAID, ICDF2C conferences. My academic supervisors are Prof. Fang Yong and Prof. Cheng Huang. I will continue my research in the field of Cybersecurity in the future.

Education

Sichuan University Chengdu, China
M.E. in Cybersecurity, Top 10%, Supervisors: Prof. Yong Fang and Prof. Cheng Huang *Sept. 2020 – Current*

Sichuan University Chengdu, China
B.E. in Cybersecurity, GPA: 3.54/4(Top 10%) *Sept. 2016 – Jun. 2020*

Research Experience

Undergraduate Research Assistant Jun. 2018 – Jun. 2020
Sichuan University *School Of Cyber Science And Engineering*

- Tracking and capturing illegal activities and key hackers in underground forums.
- Proposed a key hacker identification algorithm named HackerRank.
- Built a threat intelligence analysis system named ThreatMiner for hacker forums.

Projects

Vulnerability mining system for C/C++ source code | *Graph Neural Networks, BiLSTM* Aug. 2021 – Current

- Built a database of CVE vulnerabilities in open source software.
- Proposed pruning method with code structure supplementation.
- Proposed a fused graph neural network vulnerability detection method.
- Found some unpublished vulnerabilities.

Digital Currency Fraud Website Detection System | *Machine Learning, Flask* Oct. 2020 – Mar. 2021

- Constructed a feature matrix unique to digital currency fraud sites.
- Proposed a machine learning based detection model.
- Developed a digital currency fraud website detection system.

PyVul: Python code vulnerability mining system | *Deep Learning, OVO SVMs* Sept. 2019 – Apr. 2021

- Proposed a pruning method for python code snippets.
- Proposed a vulnerability mining method that combines code detection and contextual analysis.
- Found some vulnerable code snippets in StackOverflow.

A threat intelligence analysis system for hacker forums | *Deep Learning, Flask* May. 2019 – May. 2020

- Tracked and collected data from multiple underground forums, e.g. 0x00sec, Nulled, HiddenAnswers.
- Proposed a key hacker identification algorithm that integrates text analysis and social network analysis.
- Proposed an effective method to build a hacker profile with multiple dimensions.
- Developed a threat intelligence analysis system for hackerforums.

A QR Code Logistics Privacy Systeml | *Android, RSA, Mysql* Jun. 2018 – Mar. 2019

- Design of segmented encryption and authorization mechanisms based on the principle of least privilege.
- Obfuscation of QR codes using logstics chaos algorithm.
- Developed a express Android APP with privacy protection.

Publications

- **Wenbo Guo**, Yong Fang, Haoran Ou, et al. HyVulDect: A Hybrid Semantic Vulnerability Mining System Based on Graph Neural Network[J]. Computer & Security, (Second Review).
- Haoran Ou, Yong Fang, **Wenbo Guo**, et al. Viopolicy-Detector: An Automated Approach to Detecting GDPR Compliance Violations in Websites[C]. RAID, 2022, (Accepted).
- **Wenbo Guo**, Cheng Huang*, Weina Niu, et al. Intelligent mining vulnerabilities in python code snippets[J]. Journal of Intelligent & Fuzzy Systems, 2021, 41(2): 3615-3628. doi: 10.3233/JIFS-211011.
- Cheng Huang, **Wenbo Guo**, Yongyan Guo*, et al. HackerRank: identifying key hackers in underground forums[J]. International Journal of Distributed Sensor Networks, 2021. doi: 10.1177/15501477211015145.
- Haoran Ou, Yongyan Guo, Chaoyi Huang, Zhiying Zhao, **Wenbo Guo**, et al. No Pie in The Sky: The Digital Currency Fraud Website Detection[C]. ICDF2C, 2022: 176-193. doi: 10.1007/978-3-031-06365-7_11.
- Liang Liu,**Wenbo Guo***,Yuwei Yang,Huaiyu Guo. Research on QR code logistics privacy based on segmented encryption and time-limited control[J]. Chinese Journal of Network and Information Security, 2019, 5(4): 63-70.

Awards And Honors

- Sichuan University OPPO-CTF Competition Winner — May. 2022
- Dahua Scholarship — Dec. 2021
- First-class Academic Scholarship — Oct. 2021
- Outstanding Graduate Student — Oct. 2021
- National Inspirational Scholarship — Dec. 2019
- First Prize of Sichuan University "Internet +" Innovation and Entrepreneurship Competition — Oct. 2019
- Second Prize of the National Student Cybersecurity Training Camp — Sept. 2019
- Second Prize of the 12th National Student Information Security Competition — Aug. 2019
- Third Prize of the 4th Shanghai Student Cybersecurity Competition — Nov. 2018

Technical Skills

Languages: C/C++, Java, Android, Python, MySQL, HTML/CSS

Frameworks: Flask, TensorFlow, Pytorch, Keras, DGL

Developer Tools: Linux, Git, Docker, PyCharm, Latex

Interest: Vulnerability Detection, Privacy Protection, Network Traffic Analysis, Attack Detection