

Jianwei Huang

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in jianwei-huang

Ph.D. student specializing in vulnerability detection using program analysis and LLM-assisted fuzzing
Darpa AlxCC Final Competitor; DEF CON Speaker; Blackhat Speaker

🎓 Education

Texas A&M University

Ph.D., Computer Science

09/2019 – 12/2025(Expected)

College Station, TX

Wuhan University

Bachelor of Engineering, Computer Science

09/2014 – 06/2018

Wuhan, China

👛 Work Experience

Amazon

Security Engineer Intern

05/2025 – 08/2025

Austin, TX, USA

⚙️ LLM-Assisted Threat Modeling, LangChain

- › Developing an agentic system for automating threat modeling in GenAI application security reviews, supporting extensibility across varied information sources
- › Identified a jailbreak attack on Amazon Nova Models

SRI International

Summer Intern

05/2020 – 08/2020

Menlo Park, CA, USA

⚙️ Android Application Reverse Engineering

- › Identified two vulnerabilities in the design of popular COVID tracking apps
- › Assessed the risks posed by two vulnerabilities in 10+ popular COVID tracking apps

📖 Publications

LogicWeaver: Stitching Client Clues into Deep Web Fuzzing Paths with LLM assistance

In Submission

⚙️ LLM Agent Development, LangChain

- › **Jianwei Huang**, Guofei Gu

Beyond Visual Confusion: Understanding How Inconsistencies in ENS Normalization Facilitate Homoglyph At-WWW 2025 tacks

⚙️ Android Reverse Engineering

- › **Jianwei Huang**, Sridatta Raghavendra Chintapalli, Mengxiao Wang, Guofei Gu

SysFlow: Towards a Programmable Zero Trust Framework for System Security

IEEE TIFS 2023

⚙️ Linux Kernel Programming

- › Hong Sungmin, Lei Xu, **Jianwei Huang**, Hongda Li, Hongxin Hu, and Guofei Gu

SWAPP: A New Programmable Playground for Web Application Security

USENIX Security 2022

⚙️ Web Full Stack

- › Phakpoom Chinprutthiwong, **Jianwei Huang**, and Guofei Gu

Practical Speech Reuse Prevention in Voice-driven Services

RAID 2021

⚙️ Voice Signal Processing

- › Yangyong Zhang, Sunpreet Arora, Maliheh Shirvanian, **Jianwei Huang**, Guofei Gu

Abusing Hidden Properties to Attack the Node.js Ecosystem

USENIX Security 2021

⚙️ JavaScript Static/Dynamic Analysis

- › Feng Xiao, **Jianwei Huang**, Yichang Xiong, Guangliang Yang, Hong Hu, Guofei Gu, Wenke Lee

Unexpected Data Dependency Creation and Chaining: A New Attack to SDN

IEEE S&P 2020

⚙️ Java Static Analysis

- › Feng Xiao, Jinquan Zhang, **Jianwei Huang**, Guofei Gu, Dinghao Wu, Peng Liu

Discovering Hidden Properties to Attack the Node.js Ecosystem

Blackhat, 2020

⚙️ JavaScript Static/Dynamic Analysis

> Feng Xiao, **Jianwei Huang**, Yichang Xiong, Guangliang Yang, Hong Hu, Guofei Gu, Wenke Lee

Hacking the Brain: Customize Evil Protocol to Pwn an SDN Controller

DEF CON 26, 2018

⚙️ Java Static Analysis

> Feng Xiao, **Jianwei Huang**, Peng Liu

Chaos: An SDN-Based Moving Target Defense System

SCN 2017

⚙️ SDN Programming

> Yuan Shi, Huanguo Zhang, Juan Wang, Feng Xiao, **Jianwei Huang**, Daochen Zha, Hongxin Hu, Fei Yan, Bo Zhao

Curtain: Keep Your Hosts Away from USB Attacks

ISC 2017

⚙️ Windows Kernel Programming, Machine Learning

> Jianming Fu, **Jianwei Huang**, and Lanxin Zhang

🏆 Awards

AixCC Final Competition 2025 – TBD in August

2025

> Contributed a fuzzing strategy with static analysis results and LLM assistance

TAMUCTF 2024 – 4th (TAMU), 50th Overall

2024

> Competed individually and solved **all Web challenges**.

BCTF 2015 - 1st Place

2015

> Focused on Web challenges

oCTF 2015 - 3rd Place

2015

> Focused on Web challenges

Software-Defined Networking (SDN) Development Competition - 2nd Prize

2015, China

> Designed a moving target defense mechanism with OpenDayLight, which rotates IP addresses in the network to obfuscate the topology

⚙️ Skills

Languages C, Python, Java

Program Analysis Static(Soot, esprima, CodeQL), Dynamic(Jalangi, ExpoSE)

GenAI Agent Development, LangChain