

ZACH HELLER

Email: zach@zacheller.dev || LinkedIn: zachellerdev || Website: https://zacheller.dev

SYNOPSIS

Master's student looking for full-time network/web pentesting and security engineering roles starting after May. Open to relocation and travel. Eligible for security clearance and work in the States.

EDUCATION

Washington University in St. Louis (WUSTL), School of Engineering

Expected: May 2020

- B.S./M.S. in Computer Science (2018/2020); 3.61/4.00 GPA
- Study Abroad at the University of Queensland in Spring 2017

SKILLS

- Programming (C, Java, Python, Bash), Cloud (AWS, Oracle, GCP), Git, Splunk Certified User 6.X, Technical Writing
- Pentesting (VirtualBox, Kali Linux, OSINT, Wireshark, Nessus, Burp), Malware Analysis and RE (IDA, gdb-peda)

CYBERSECURITY EXPERIENCE

[Work] Head of Cyber Security Curriculum Development at The Coding School

Summer 2019–Present

- Design curriculum and develop challenges for 1 on 1 tutoring for Middle and High school students to go from zero to capable of playing in Capture the Flag (CTF) security competitions, starting with Linux concepts and *Bash* scripting in a VM and covering common CTF topics (Steganography, Cryptography, Web Vulnerabilities, Binary Exploitation, Reverse Engineering) with hands-on lessons

[Research] Almiraj: A Method for Fuzzing Embedded Systems Leveraging the Unicorn Engine & AFL Spring 2019

- Developed portable method for fuzzing embedded system binaries by leveraging architecture emulation through Unicorn Engine to bypass hardware limitations of previously explored fuzzers. Integrated components to allow Unicorn to read/write to memory mapped IO through JTAG and allow for replaying of crashing inputs on target device

[Home Lab] Penetration Testing & Security Challenges

2019–Present

- Run virtualized lab on internal network for rooting Vulnhub boxes; complete HackTheBox and TryHackMe challenges

[Incident Response] Webmaster on Exec Board for WUSTL Habitat for Humanity Chapter

2014–2017

- Determined source of hack (CVE-2014-9033), restored site, presented post-mortem and recommendations to club

RELEVANT COMMUNITY EXPERIENCE

Founding Member of b34r\$hell, WUSTL's competitive hacking (CTF) team

2019–Present

- 1st place at STLCyberCon CTF, 3rd place at STL Converge Tour CTF (Nov. 2019)
- 1st place at VMWare Carbon Black CTF at RSAC (Feb. 2020)

Participant of BSidesSTL, BSidesSF, **Member** of STLCYBER, OWASP St. Louis, Cloud Security Alliance **2018–Present**

TEACHING EXPERIENCE

Teaching Fellow at LaunchCode (St. Louis, MO)

Summer 2019–Present

- Teach MEAN stack and Java Spring Boot web development in project-based course to cohort of adults of diverse backgrounds, ages, and abilities for eight hours a week

Tutor at CodeConnects (Remote)

Summer 2019–Present

- 1 on 1 tutoring over Google Hangouts with focus on CTF topics and solving basic VulnHub challenges

Instructor at CodeREV (Mountain View, CA)

Summer 2017

- Taught coding basics to groups of 3rd graders at a summer camp through guided simple game development assignments in Scratch and JavaScript

Teaching Assistant at Washington University in St. Louis

2016–2017

for (CSE 503S: Rapid Prototype Development && CSE 438S: Mobile Application Development)

- Held office hours, graded labs and studios, helped write exams. Content incl. HTML, CSS, Git, Bash, AWS, LAMP, OWASP, Python, RegEx, JavaScript, AJAX, JSON, Node.JS, Socket.IO, React, Angular JS, and Swift

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ADDITIONAL RELEVANT EXPERIENCE

Developer Intern at Equifax Workforce Solutions (St. Louis, MO)

Summer 2018

- Identified and reported two separate ways to get root access outside of protocol
- Designed API to integrate webservice and replace manual update system (C#, .NET); Implemented web app to check service health, databases, dependencies, and versioning to aid work with offshore teams; Built Excel interface in VBA for finance team to harvest and reassign software license, saving \$170,000/year
- Co-started intern scrum team to develop Buddy System web app and organized Corporate Social Responsibility event

EXTRACURRICULAR EXPERIENCE

President of Okinawan Karate-do Club, Assistant Instructor of WUSTL Okinawan Karate-do P.E. Class

2015–2019

- Recruited and helped train over 20 members, led extra practices for advanced students on weekends, and transitioned club into an official P.E. class

Pixel Artist for multiple indie games and assorted commissions

2017–2018

- Lead art designer (and co-lead developer) for Kat Attak (<https://katattak.itch.io/kat-attak>)

Tango Dancer for ALAS Carnival Performance

2016–2017

- Worked with dance partner on eight-person team to learn tango choreography and perform in a student-run Latin cultural production at Edison Theatre

President and Co-founder of Delta Beta Om

2015–2018

- Started and ran unofficial co-ed fraternity to support healthy (school)work/life balance
- Hosted and promoted open social and mindfulness-focused events