

Mitchell Zakocs

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Relevant Experience

Arizona State University SEFCOM Lab • Computer Security Researcher • Tempe, AZ

Jun 2021 - Present

- Competing on a team for DARPA's AIxCC aiming to introduce LLM research into the computer security sector
- Auditing code and creating tools to find and exploit vulnerabilities in critical software (Chrome, Baseband, EDK2)
- Analyzed and hardened a laser communications system for satellites alongside DARPA, Arm®, and Honeywell

Tesla • Product Security Engineer Intern • Tempe, AZ

May 2024 - Aug 2024

- Audited remote attack surfaces on vehicles and wrote 10+ advanced fuzzers for critical wireless/radio firmware
- Developed and deployed critical software exploit mitigations for Optimus and other AI platforms
- Reviewed pull requests, managed Jira tickets, and assisted with design decisions regarding build infrastructure, backend services, and firmware development

NASA • Software Simulation Engineer Intern • Greenbelt, MD

May 2022 - Aug 2022

- Interned on the ILLUMA-T team working with laser/optical communications on the International Space Station
 - Tasked with writing a Python simulator for the ISS hardware and integrating it with their flight control software
 - Used PyQt, CFDP, multithreading, and extensive architectural planning to build performant and reliable software
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Highlighted Projects

Qualcomm Baseband Scripts (github.com/mzakocs/qualcomm_baseband_scripts)

2023

- Released 10+ advanced Python tools for reverse-engineering firmware from Qualcomm cellular baseband SoCs
- Over 100 stars on GitHub; contains knowledge and techniques found nowhere else on the internet

Coconut CubeSat Flight Software ([Currently Private](#))

2023

- Flight software written in C with FreeRTOS; satellite project backed by NASA CubeSat Launch Initiative
 - Volunteering as the lead developer for the satellite's firmware team at the ASU Interplanetary Initiative
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Education & Certifications

Arizona State University, Ira. A Fulton & Barrett Honors College • Tempe, AZ

2021 - 2025 (Current Junior)

- BS Computer Science, Dean's List, 3.90 GPA
 - Extracurriculars: **Researcher** @ SEFCOM Security Lab; **Officer** @ ASU Hacking Club; **Member** @ Shellphish Hacking Team; **SWE Volunteer** @ Sun Devil Satellite Laboratory
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Awards & Achievements

Study Abroad Summer 2023: Participated in [international literature program](#) in Switzerland, Germany, and France

Pwn2Own 2023: Toronto WyzeCam Winner (1 vuln, [w/ SEFCOM](#)), Vancouver Tesla Model S Entrant (11 vulns, [solo](#))

Flinn Scholar: 1/20 students selected from nearly 1000 applicants to receive a prestigious full-ride scholarship

Seal of Biliteracy: Recognized fluency in Spanish through difficult standardized language & culture assessments

Relevant Skills

Languages: C, C++, Python, Assembly (x86/ARM/MIPS/PPC/etc), Rust, JavaScript, Java

Technologies: AFL, libFuzzer, libAFL, QEMU, glibc, Linux Kernel, IDAPython, Unicorn, Capstone, Node.js

Data Management: PostgreSQL, SQLite, MongoDB, BigQuery, REST, Looker, dbt, Apollo, GraphQL

Miscellaneous: IDA Pro, Ghidra, gdb, pwntools, Git, GitHub, Kubernetes, Visual Studio, LLVM, Software Exploitation