

# Mitchell Zakocs

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## Recent Experience

**Computer Security Research Aide, Arizona State University SEFCOM Lab • Tempe, AZ** *Jan 2022 - Present*

- Securing photonic lasers on satellites with DARPA & honing exploit development/vulnerability analysis skills

**Business Operations Analyst Intern, Culdesac • Tempe, AZ** *5 mos, Aug 2021 - Dec 2021*

- Created impactful data insights and visualizations using Looker and SQL
- Designed meaningful data dashboards by amassing insights & visualizations; influenced large company decisions regarding leases, deposits, properties, etc.
- Ventured into Data Engineering and complex data pipeline management through LookML, dbt, and BigQuery

**Summer Research Aide, Arizona State University SEFCOM Lab • Tempe, AZ** *3 mos, Jun 2021 - Aug 2021*

- Researched industry-standard software obfuscation solutions and generated methods to counter and improve them
- Wrote IDAPython plugins to remove certain obfuscations and gained plenty of software binary analysis experience
- Released two technical write-ups for the research on personal blog; increased traffic to website by over 400%

**Software Applications Engineer Intern, Ordertech • Tempe, AZ** *6 mos, Mar 2020 - Aug 2020*

- Built software for single-page JavaScript applications in the front-end and Java & Python in the back-end
- Engineered a unified communications system using SIP, WebRTC, Java, and JavaScript for integrated phone call and text chat functionality; yielded company up to 35% increased revenue on certain clients for CRM services
- Devised a productivity-focused cloud email system for managing customer support tickets and internal tasks

**Electrical Software Engineer Intern, Circuit Specialists • Tempe, AZ** *6 mos, Aug 2019 - Jan 2020*

- Developed software for embedded microcontrollers in Python and C programming languages
  - Launched projects for clients involving extensive integrated PCB design, custom firmware programming, debugging, soldering, reverse-engineering, troubleshooting, rewiring, battery rebuilding, and more
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## Highlighted Projects

**Virtualization Obfuscator Analysis ([github.com/mzakocs/VirtualizationObfuscatorAnalysis](https://github.com/mzakocs/VirtualizationObfuscatorAnalysis))** *2021*

- Researched industry-standard software obfuscation solutions and generated methods to counter and improve them
- Collection of IDA Pro Databases, Adobe Illustrator Diagrams, and analysis tools related to obfuscation research

**Google Meets Client-Side Auth Exploit ([github.com/mzakocs/GoogleMeetBreakoutSecurity](https://github.com/mzakocs/GoogleMeetBreakoutSecurity))** *2021*

- Developed proof of concept for an exploit that allowed attackers to join any breakout room in a Google Meet call
  - Reported vulnerability to Google VRP and was analyzed by a board of senior application security specialists
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## Education & Certifications

**Arizona State University, Ira. A Fulton & Barrett Honors College • Tempe, AZ** *2021 - 2025*

- *Computer Science (Software Engineering), BS*
  - *Extracurriculars: Shellphish CTF Team (Computer Security Competitions), SEFCOM Research Lab*
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## Awards & Achievements

**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

**PicoCTF 2021:** Computer Security competition; scored Top 10 in the US for solo teams and Top 100 in the US overall

**Scudder Award:** Award for outstanding academic excellence, high standards of character, and intellectual curiosity

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## Relevant Skills

**Languages:** Python, C, x86 Assembly, JavaScript, Java, C++, Julia, C#, HTML, CSS

**Technologies:** WinAPI, IDAPython, Unicorn, Capstone, Keystone, React, Node.js, Express.js, Material-UI, Chrome API

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

**Miscellaneous:** Git, GitHub, IDA Pro, Burp Suite, OllyDbg, x64dbg, gdb, Visual Studio, Vagrant, Linux / Unix, SIP