Mitchell Zakocs

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Recent Experience

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

- Working on bleeding-edge computer security research related to software and exploit development

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

Highlighted Projects

Virtualization Obfuscator Analysis (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) ***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

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*

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

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, TCP/UDP, SIP