Shay Mordechai

Cloud Security Researcher | DevSecOps & Network Specialist

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Summary

Passionate Security Researcher with exceptional learning agility, deep expertise in Network Analysis and Reverse Engineering. Combines academic excellence **(GPA 89)** with hands-on experience in building custom security tools (Python/Scapy) and securing CI/CD pipelines. Currently focused on **Cloud-Native security research**, simulating attack vectors in Kubernetes environments. Highly motivated to leverage strong networking fundamentals into advanced Vulnerability Research roles.

Professional Experience

DevSecOps Intern | *Israel Tax Authority* | *2024 – 2025*

- **Implemented a Defense-in-Depth strategy:** Enforced **Schema Hardening**, conducted rigorous **Secure Code Reviews**, and provided debugging guidance to developers.
- Integrated SAST/SCA tools (Checkmarx) into CI/CD pipelines within Azure DevOps.
- Collaborated with SOC, SIEM, and InfoSec teams on secure system design and incident handling within Agile workflows.

Combat Soldier | Intelligence Gathering Unit, IDF

Technical Projects

Kubernetes Security Home Lab | *Self-Initiated Project*

- ***Established an experimental environment*** *(Fedora/Ubuntu/Kubeadm) to explore Cloud-Native attack surfaces and virtualization.*
- ***Explored*** *CNI (Calico) implementations and Overlay Networks to understand Lateral Movement vectors and Network Policy bypasses.*
- ***Simulated security scenarios*** *such as Container Escapes and API Server misconfigurations to practice runtime threat detection using Falco.*

AI-Augmented Vulnerability Research (SBCL Compiler) | (Private Repo - Responsible Disclosure in Progress) - Orchestrated an experimental research workflow to fuzz the SBCL compiler, identifying **3 potential zero-day vulnerabilities** (Memory Corruption/Stack Exhaustion). Validated findings through crash analysis, demonstrating deep understanding of **memory layout** and input validation mechanisms.

Network Protocol & Traffic Analysis | Developed a comprehensive network research portfolio including:

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- **CTF Platform**: Developed a custom challenge platform (3,400+ LoC in Python) simulating ICMP Exfiltration and TLS Spoofing. [GitHub]
- **TLS Traffic Generator**: Built a traffic generation tool using Scapy for custom handshake manipulation and packet crafting. [GitHub]
- **Core Protocols Implementation**: Built HTTP, DNS, and SMTP servers from scratch using Raw Sockets to analyze low-level packet structures. [GitHub]

Cloud Automation – Developed Python automation scripts for AWS & GCP APIs, focusing on asset management and configuration validation.

Education

B.Sc. Computer Science | Jerusalem College of Technology *(Graduating 2025)* **|** GPA: 89
Relevant coursework: Reverse Engineering (93), Network Analysis (97), Information Security (90).

Technical Skills

Cloud & Containers: Kubernetes (K8s), Docker, Minikube, AWS, Azure DevOps, rclone

Security Research: Network Protocol Analysis, Reverse Engineering, Malware Analysis, Fuzzing

Development: Python(Advanced - Automation/Tooling), C/C++, Bash, SQL, Assembly

Tools: Wireshark, Burp Suite, IDA Pro, Checkmarx (SAST/SCA), Git, Linux (Fedora Atomic/Kali)

Languages: Hebrew (Native), English (Fluent)