

# Peter Farah

## Summary

Cybersecurity and network engineer with a Master's in Cybersecurity from *Institut Polytechnique de Paris* and a Bachelor's in Computer and Communications Engineering from *AUB*. Experienced in research and real-world deployments of secure network architectures, automation, and monitoring. Developed state-of-the-art classification of AQM systems in routers. Skilled in Python, C, networking, and security automation.

## Education

### **Institut Polytechnique de Paris** — *Master's in Computer Science - Cybersecurity (Highest Distinction)*

2023 – 2025, Palaiseau, France

Specialized in advanced network security, secure protocols, system and application security, attack detection.

Research on protection systems in routers (AQM) against fairness attacks in TCP.

### **American University of Beirut** — *B.E. in Computer and Communications Engineering*

2018 – 2022, Beirut, Lebanon

Placed multiple times on the Dean's Honor List.

Focused on computer networks, cryptography, cybersecurity, internet security.

## Experience

### **Telecom Sud-Paris / Institut Polytechnique de Paris** — *Research Intern*

Sep 2024 – Sep 2025; Palaiseau, France

Architected and implemented a framework for classifying Queue Management techniques in routers.

Designed C programs to capture network parameters and generate UDP traffic traces.

Built Python automation for experiment orchestration and classification of AQM algorithms.

Achieved state-of-the-art AQM classification in real-world networks.

### **Exeo** — *SOC R&D Intern*

Apr 2024 – Jul 2024; Paris, France

Automated security posture visualization by integrating Bitdefender, Prometheus, and Grafana.

Developed Python scripts for alerting, ticket automation (Autotask), and data integration via APIs.

Delivered unified dashboards and alert workflows improving response time.

### **Dar Group** — *Network Security Engineer*

Mar 2023 – Aug 2023; Beirut, Lebanon

Managed the configuration, deployment, security hardening, and troubleshooting of over 100 Cisco switches

Managed FortiGate firewalls, and IPsec VPN tunnels.

Supervised junior engineers in lab deployments and Mikrotik configurations.

### **Potech Consulting** — *Cyber Threat Intelligence Intern*

Jun 2022 – Dec 2022; Beirut, Lebanon

Automated reconnaissance and takedown processes using Python and web scraping.

## Notable Projects

Secure File Transfer System: Client-server with custom CA, hybrid encryption (RSA/AES).

TCP Injection Attack: Injected spoofed HTTP responses in tracked TCP flows.

DNS Spoofing Attack: Crafted forged DNS replies for interception simulation.

SYN Flood Attack and Detection: Custom attacker and detector for SYN flood.

Galois Field Calculator: Instant results for non-trivial arithmetic computations in Galois Fields GF(2^571).

ICMP Quench local network attack: Find active local IPs and send ICMP quench to all.

Linux Home server with automation scripts and metrics monitoring

## Skills

**Programming:** Python, C

**Networking & Security:** Cisco IOS, Fortinet, Mikrotik, Wireshark, Nmap, Burp Suite, Nmap

**Tools & Automation:** Grafana, Prometheus, API integration, Linux, Docker

**Languages:** English (Fluent), French (Fluent), Arabic (Fluent)

## Contact and Links

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