

Enrique Sobrados

PhD Student, Computer Science

University of New Mexico

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RESEARCH OVERVIEW

My research explores security and privacy vulnerabilities in networked systems and mobile communications. I analyze how configuration practices and insecure protocols, such as in VPNs or SMS-embedded links, impact user safety. By applying machine learning to large-scale datasets, I aim to automate detection of privacy leaks, detect configuration anomalies, and develop viable solutions for secure deployment.

EDUCATION

- PH.D., Computer Science, University of New Mexico, Albuquerque, NM, USA Present
Advisor: Dr. Afsah Anwar
- M.S., Computer Science, University of New Mexico, Albuquerque, NM, USA 2025
- B.S., Computer Science, University of Engineering and Technology, Lima, Peru 2023

TECHNICAL PUBLICATIONS

- [1] [NDSS'26] **MVPNAnalyzer: An Investigative Framework for the Security & Privacy Audit of Mobile VPNs.** Wayne Wang*, Aaron Ortwein*, Enrique Sobrados*, Robert Stanley, Piyush Kumar, Afsah Anwar, and Roya Ensafi
In: *Network and Distributed System Security Symposium (NDSS)*, 2026 (* joint first authors)
- [2] [In Submission] **SpyChain: Multi-Vector Supply Chain Attacks on Small Satellite Systems.** Jack Vanlyssel, Enrique Sobrados, Ramsha Anwar, Gruia-Catalin Roman, and Afsah Anwar
- [3] [In Submission] **Private Links, Public Leaks: Consequences of Frictionless User Experience on the Security and Privacy Posture of SMS-Delivered URLs.** Muhammad Danish, Enrique Sobrados, Bhupendra Acharya, Muhammad Saad, Abdullah Mueen, Sazzadur Rahaman, and Afsah Anwar
- [4] [In Progress] **A Large-Scale Study of Legacy VPN Protocol Use and Misconfigurations.** Enrique Sobrados, Muhammad Danish, Aaron Ortwein, Roya Ensafi, and Afsah Anwar

PROFESSIONAL EXPERIENCE

- **Graduate Research Assistant**, University of New Mexico Present
 - Built **MVPNAnalyzer**: extensible mobile-VPN auditing framework (DNS leaks, obfuscation, cleartext traffic, and OpenVPN configurations).
 - Disclosed vulnerabilities to **40+** VPN providers, with **6** acknowledging vulnerabilities so far.
 - Enumerated infrastructure for **~60,000** VPN servers; reverse-engineered APIs to map **20+** endpoints.
- **Software Engineer (Project Consultant)**, Meta-Innovaciones S.A.C., Peru 2023
 - Developed the front-end for **multiple** intake desk processes, including administrative litigation.
 - Performed secure code reviews and remediated **4 security** weaknesses.
 - Automated taxpayer report generation using Jasper Reports + SpringBoot Backend, reducing manual processing effort by over **80%**.
 - Assisted in designing a **scalable database** architecture for multiple system modules, improving data consistency.
- **Security Analyst Intern**, National Bank, Peru 2022
 - Operated VPNs on **Palo Alto & Check Point** (IPsec/IKEv2) for **~2,000** users.
 - Tuned **Forcepoint** web filtering; cut false positives **15%** while preserving business access.
 - Automated ATM key generation/rotation in **Bash**; standardized ceremonies; saved **6 hrs/week**.
 - Ran vuln triage across **2** services; **5** issues remediated in **4** weeks.

TEACHING

- **Guest Lecturer**, University of New Mexico — Intro to Cybersecurity 2025

- **Teaching Assistant**, University of New Mexico — Intro to Cybersecurity 2024
- **Teaching Assistant**, University of New Mexico — Declarative Programming 2023
- **Teaching Assistant**, Le Wagon — Web Development Bootcamp 2021
- **Teaching Assistant**, University of Engineering and Technology — Intro to Object-Oriented Programming 2020

SKILLS

1. **Programming Languages:** Python, C/C++, Java, Ruby, JavaScript
2. **Offensive Security:** Nmap, Burp Suite, Metasploit, Ghidra, Wireshark, Kali
3. **Web Development:** Angular, React/NextJS, Spring Boot, Rails, Bootstrap, Tailwind
4. **Cloud & Infrastructure:** Active Directory, Microsoft Azure, SQL Server, Docker, Kubernetes
5. **Machine Learning:** PyTorch, Keras, TensorFlow, LLMs, Meta Learning, RAG, GNN
6. **Languages:** Spanish, English, German
7. **Professional:** Team player, Leadership, Self-learning

CERTIFICATIONS

1. Junior Penetration Tester (eJPTv2) INE Security
2. PEN-100, SOC-100, WEB-100 Offensive Security

AWARDS & LEADERSHIP

- **President**, LoboSec (UNM CTF Team) Present
- **NDSS Fellowship**, Internet Society 2026
- **1st place — Top Scorer**, Alamo CTF 2025
- **CS Department Award**, University of New Mexico 2024
- **1st Place — Tracer Fire CTF**, Sandia National Laboratories 2023
- **ACSAC Student Conferenceship** 2023

REFERENCES

Afsah Anwar, Assistant Professor
 Department of Computer Science, University of New Mexico
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