# Edoardo Ottavianelli

edoardoottavianelli.it

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## Experience

- **Sapienza University** — Full Remote
  `Security Researcher` — *June 2023 - Present*

  Received a research grant at DIET Department to continue the studies on security in programmable networks.
  - Designed, implemented and tested an innovative framework for anomalies and attacks detection in network environments through log analysis using Python and Bash.
  - Studying and defining system scenarios and technical requirements and specifications for a new communication protocol for satellite networks (in collaboration with European Space Agency).
  - Discovered vulnerabilities and new attack methodologies through testing, static and dynamic analysis in network applications written in Java.

- **Bugcrowd** — Full Remote
  `Security Researcher` — *Nov. 2021 - Present*
  - **bugcrowd.com/edoardottt**: Successfully identified and reported 250+ security vulnerabilities in high-profile companies and U.S. Government offices, with a specialization in web applications.
  - **CISA Competition**: Recognized for outstanding work by reaching second place at the Cybersecurity and Infrastructure Security Agency (CISA) 2021 Competition.

- **SeismoCloud** — Rome, Italy
  `Software Developer` — *Mar. 2020 - Oct. 2020*
  - **SeismoCloud EUD system**: Designed, implemented and secured an user-friendly End User Development system (Docker, NodeJS) to enable non-technical users to configure and control networks of IoT devices and online services (e.g. automate actions such as sending Telegram/Email messages and posting tweets through IoT devices data).
  - **API development**: Resolved issues in the SeismoCloud REST API system (Golang) providing information on Sensors signalings, devices and users' data, as well as associated statistics.

## Education

- **Sapienza University** — Rome, Italy
  `Master's Degree in Cybersecurity; 109/110` — *Oct. 2020 – May 2023*

  Dissertation: "Proposal and Investigation of a framework for Cross App Poisoning attacks detection in Software Defined Networks."

- **Sapienza University** — Rome, Italy
  `Bachelor's Degree in Computer Science; 103/110` — *Sept. 2016 – Oct. 2020*

  Dissertation: "Design and development of the End User Development system in SeismoCloud".

- **Fabio Besta Scientific High School** — Orte, Italy
  `Scientific High School Diploma; 71/100` — *Sept. 2011 – July 2016*

## Technical Skills

Software Development, Application and Network Security. Extensive knowledge of networks and networking protocols (TCP/IP, Routing, HTTP, DNS, DHCP, IPS, IDS, Firewall, Proxy).

- **Languages**: Python, Go, Bash, Java, C, Javascript, SQL, HTML and other C-family languages.
- **Technologies**: Linux (Local, VM and in Cloud), Windows, Git, GitHub Actions, BurpSuite, SAST and DAST, Metasploit, Nessus, Nuclei and other vulnerability scanners, Docker, MySQL, PostgreSQL, MongoDB, SQLite, VSCode, Wireshark, Postman.

## Awards - Certifications - Licenses

- **ICCA by INE**
  Certified Cloud Associate (ICCA Certificate link)
- **eWPT by eLearnSecurity (INE)**
  Certified Web Application Penetration Tester (eWPT Certificate link)
- **eJPT by eLearnSecurity (INE)**
  Certified Junior Penetration Tester (eJPT Certificate link)
- **Class B European Driving License**

## Personal Projects

Open-sourcing since 2018, reached 10k+ stars on GitHub: github.com/edoardottt

- **scilla**: Information Gathering tool - DNS / Subdomains / Ports / Directories enumeration
- **cariddi**: Take a list of domains, crawl urls and scan for endpoints, secrets, api keys, file extensions, tokens and more
- **csprecon**: Discover new target domains using Content Security Policy.
- **lit-bb-hack-tools**: Little Bug Bounty and Hacking Tools.

## Security Advisories

Discovered, reported and responsibly disclosed many undetected vulnerabilities in popular products (mainly with code reviews, but also testing, static and dynamic analysis): edoardoottavianelli.it/cve

## Languages

- **Italian**: Native speaking.
- **English**: Middle-level speaking.

## Scientific Publications

- **Simplify Node-RED for End User Development in SeismoCloud**
  Enrico Bassetti, Edoardo Ottavianelli, Emanuele Panizzi
  https://arxiv.org/pdf/2012.05637.pdf