Filippo Visconti

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EDUCATION

Eidgenössische Technische Hochschule Zürich
Zürich (Switzerland)

Master of Science in Computer Science   *Sept. 2022 – exp. Aug. 2024*

- Major in **Secure and Reliable Systems** - Minor in **Networking**
- Current GPA: 5.35/6.0.
- Final thesis: "*Securing satellite receiver firmware upgrades*" in collaboration with *armasuisse*
- Thesis supervisors: Prof. Shweta Shinde and Dr. Vincent Lenders

Università degli Studi Roma TRE
Rome (Italy)

Bachelor of Science in Computer Engineering   *Sept. 2019 – July 2022*

- Graduated with 110/110 cum Laude
- Final GPA: 28.9/30.0.
- Final thesis: "*Realization of a cyber defense system: analysis of VPN solutions.*"
- Thesis supervisor: Prof. Maurizio Patrignani

Pugwash District High School
Pugwash (Canada)

Canadian High School Diploma   *Sept. 2017 – Jun. 2018*

- Graduated with Honors.
- Final GPA: 98/100.

Liceo Scientifico Statale Farnesina
Rome (Italy)

Italian High-School Diploma in Scientific Studies   *Sept. 2014 – July 2019*

- Final Mark: 92/100.

TECHNICAL SKILLS

Tools and Libraries

- Virtualization: Docker, LXC, VMware, VirtualBox, Proxmox VE, ESXi,
- Network: WireGuard, OpenVPN, Wireshark, nmap, iptables, Squid, Snort
- Linux services: Ansible, PostgreSQL, MySQL, Apache, Nginx, Samba, Bind, Dnsmasq, DHCPd
- Databases: MySQL, PostgreSQL, SQLite
- Binary analysis: Ghidra, GDB, Valgrind, AFL
- Web: Flask, Springboot, React, Next.JS
- High Performance Computing: OpenMP, MPI, basics of CUDA, SIMD instructions, Intel Intrinsics
- Misc: Git, GitHub Actions, LaTeX, Vim, Makefile

Programming Languages

- C: POSIX syscalls, threads and processes management, parallel programming,
- Java, C♯, Python
- Bash and basics of: OCaml, Go, TypeScript, PHP

Projects

Full portfolio on GitHub

- 2024 – Barber Shop – Developed a web app for a fictitious barber shop using Next.JS with a booking system.
- 2023 – Blake – Developed a multi-threaded, optimized version of the Blake algorithm in C.
- 2023 – Rowhammer – Implemented a Rowhammer attack in C.
- 2023 – Worst Case Optimal Joins – Implemented a worst-case optimal join algorithm in C.
- 2023 – mini-acme – Developed a minimal ACME client in Python.
- 2022 – Fuzzible – Developed a fuzzing tool for Ansible modules using Python and Docker containers.
- 2021 – FillYourTeam! – Developed a multi-platform app using Xamarin framework and MVVM architecture.

EXPERIENCE

Ecotherm S.p.A.
Freelance Software Developer

Rome (Italy)
Dec 2023

- Migrated an internal web GIS application from a legacy LAMP stack to a modern one.
- Fixed bugs and added new features.
- Installed and setup a new dedicated server.

Bytewise S.r.l.
System Engineering Intern

Rome (Italy)
Mar 2022 – June 2022

- Designed and installed a cyber defense system for a small business, including assembling the hardware.
- Installed and configured servers, for services like firewall, proxy, reverse proxy, DNS, DHCP, VPN, IDS, IPS.
- Installed and managed routers and switches, configured VLANS, site-to-site WireGuard VPNs.
- Worked on RHEL and Debian-based ditributions.
- Performed basic penetration testing using nmap, Metasploit, OpenVAS, dirbuster, and others.

CyberChallenge.it
Participant

Rome (Italy)
Feb 2023 – June 2023

- Participated in the 2023 edition of the CyberChallenge.it, a national cybersecurity competition.
- Ranked 1st in the local competition.
- Ranked 26th over 41 in the national competition.

Talks
Seminar speaker at Università degli Studi Roma TRE

- Intro to Hardware Vulnerabilities (Rowhammer, Meltdown) - Rome, January 2024
- Intro to Stack Overflows and Buffer Overflows - Rome, March 2023

OTHER EXPERIENCES

Università degli Studi Roma TRE
ICT Support and Management

Rome (Italy)
Mar 2021 – June 2022

- Managed accounts and software licenses.
- Provided support through a technical helpdesk.

Head of the Model International Court of Justice
Liceo Scientifico Statale Farnesina

Rome (Italy)
Sept 2019 – Feb 2020

- Organized and managed the sessions for the Model International Court of Justice.

Delegate at the Model United Nations
Santa Teresa High School

San Jose (California, USA)
Jan 2019

- Participated in the Model United Nations conference, as a country representative in the Legal Committee.

LANGUAGES, SKILLS AND INTERESTS

Languages: Italian: mother tongue. English: excellent (C2). Spanish: fair.
Licences: A2 motorcycle, B car, Unrestricted Boating licence (both sailing and motor), Drone Open A1-A3 licence.
Hobbies: music production, sailing, motorcycles, restoring classic cars.