

Nicholas Montana

About me

I am a student in computer science developing master thesis about compilers and profile guided optimization.

Work experience

Analyst | Indra - Minsait | 01/11/2022 - 20/09/2023 | Rome, Italy

Design of SAS algorithms for Italian energy providers Acea and Terna.

Defining and implementing client requirements in coordination with multiple teams.

Deep study of non-normalized databases and Data Oriented Programming.

Business or sector Information and communication | **Website:** <https://www.indracompany.com/en/minsait>

Education & Training

Diploma | Carlo e Nello Rosselli - Istituto d'Istruzione Superiore | 01/09/2014 - 01/06/2019 | Aprilia, Italy

Deep knowledge of electrical components and their mathematical properties.

Design of digital circuits.

Knowledge of widely used programmable MCU (Arduino, Raspberry PI)

PLC programming for industrial machinery.

Field of study Information and Communication Technologies | **Final grade:** 82/100

Bachelor Degree | Sapienza - Università di Roma | 01/09/2019 - 01/11/2022 | Roma, Italy

Advanced understanding of fundamental Computer Science concepts.

In-depth knowledge of modern computer architectures.

Strong proficiency in programming languages and familiarity with multiple programming paradigms.

Experience with imperative programming (Python, C).

Proficiency in object-oriented programming (Java).

Solid foundation in functional programming (Haskell, ML).

Comprehensive understanding of concurrent programming (OpenMP, MPI).

Skilled in algorithm design and complexity analysis.

Knowledge of network protocols and their applications.

Understanding of cybersecurity fundamentals.

Field of study Information and Communication Technologies | **Final grade:** 110/110 con lode | **Number of credits:** 180 | **Thesis:** Una Configuration Theory per weak memory models.

Master Thesis | Sapienza - Università di Roma | 31/08/2023 - Current | Rome, Italy

Distributed systems theory, blockchains and cryptocurrencies

Malware analysis

Binary exploitation and web exploitation techniques

Reverse engineering

Mobile application development

Honours and Awards

Finalist at the Cyberchallenge national competition. | Cybersecurity National Lab

I managed to compete as a finalist in the cybersecurity national program cyberchallenge.it.

Hobbies and Interests

CTF player

In my spare time, I participate in Capture The Flag (CTF) competitions as a member of the academic team TheRomanxploit, where I actively apply and enhance my cybersecurity skills—with a particular focus on reverse engineering, which I consider my area of greatest interest.

Skills

Git | C | Java | Python | Windows | HTML | Javascript | SQL | Linux | Version Control (Git)

Cybersecurity | Binary Exploitation (Stack canaries, BufferOverflows, Format Strings) | Kali Linux, Blackarch | Malware Investigation (Malware Analysis) | Basic Reverse Engineering x86/x64 (IDA, Ghidra, GDB) | Utilizzo di strumenti OSINT - Open Source Intelligence (buona)

Language Skills

Mother tongue(s): **Italian**

	Understanding		Speaking		Writing
	Listening	Reading	Spoken production	Spoken interaction	
English	B1	B1	B1	B1	B1