Antonio **Pelusi**

Ph.D. researcher

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Skills

Back-end	C, C++, Java, Kotlin, Python · Django, Jekyll, Android SDK, RayLib · SQL, NoSQL (MongoDB, Neo4j)
Front-end	HTML, CSS, JavaScript · ImGui, JavaFX, Semantic UI, Bootstrap
Libraries	OpenMP, CUDA, Socket, Pandas, Numpy, MatPlotLib, Seaborn, SKLearn, NLTK, Asyncio
Tools	Linux, Git, Docker, Make, Gradle, Maven
Languages	Italian, English

Education

Ph.D. in Computer Science and Mathematics of Computation
*nov. 2024 → **Ongoing***

UNIVERSITY OF INSUBRIA · RANDOM POWER

- Investigating privacy preservation techniques, including Differential Privacy, to enhance data security and user anonymity.
- Analyzing the impact of randomness on privacy-preserving methodologies to optimize data protection strategies.
- Conducting research on applications of the "Random Power's in-silico quantum generator of random bit streams".

Master's Degree in Computer Science
sep. 2022 → apr. 2024

UNIVERSITY OF MODENA AND REGGIO EMILIA
110/110

- Advanced Knowledge: Focused on algorithms, machine learning, computational theory, and complex data structures.
- Big Data & Machine Learning: Analyzed large datasets and implemented algorithms for data-driven insights.
- Cybersecurity & Cryptography: Studied cybersecurity principles and cryptographic techniques for data protection.

Post Graduate Degree CBI.Attract
feb. 2023 → jun. 2023

UNIVERSITY OF BOLOGNA
30L/30

- Discover: Identified tech opportunities with societal impact and understood assigned technologies.
- Design: Applied Design Thinking to create user-centered solutions and refined prototypes through testing.
- Develop: Created a functional prototype, validated solutions with stakeholders, and planned implementation.

Bachelor's Degree in Computer Science
sep. 2018 → apr. 2022

UNIVERSITY OF MODENA AND REGGIO EMILIA

- Foundational Knowledge: Covered algorithms, data structures, programming languages, computer architecture, and OS.
- Mathematical Foundations: Included discrete mathematics, calculus, statistics, and linear algebra.
- Software Development Skills: Emphasized software engineering principles, coding practices, and version control.

Work and research experience

Random Power (startup)
*may 2024 → **Ongoing***

SOFTWARE DEVELOPER
Como, Italy

- Involved from day one in the development of Random Power's bit generation client/server platform.

A. Paradisi High School
sep. 2024 → jul. 2024

HIGH SCHOOL TEACHER
Vignola, Italy

- Guided students in computational thinking.

University of Modena and Reggio Emilia
sep. 2024 → dec. 2024

UNIVERSITY TUTOR
Modena, Italy

- Helped mathematics students understand programming concepts.

Liferay Inc.
may 2021 → jul. 2021

JUNIOR SOFTWARE DEVELOPER
Remote

- Integrated the Stripe payment method into the Open Source Liferay Portal.

Publications

Privacy Preservation in Data Sharing: A Study on Differential Privacy
Apr. 2024

UNIVERSITY OF MODENA AND REGGIO EMILIA
Master's thesis

- `https://doi.org/10.6084/m9.figshare.26411314`

Awards

Green & Digital Transformation two-day Hackathon *sep. 2023*

University of Modena and Reggio Emilia Mantua, Italy

- Winner of the hackathon with a machine learning-based model for predicting and optimizing water consumption.

Activities

CBI.Attract Research Mission *may 2023*

AGH University Krakow, Poland

- Research on the True Random Bit Generator hardware by Random Power at AGH University in Krakow.

CBI.Attract Collision Week *mar. 2023*

CERN · IdeaSquare Geneva, Switzerland

- Exploration of the Discover, Design, and Develop techniques at the CERN research center.

Certifications

Trends in Modern Cryptography *sep. 2024 → dec. 2024*

De Cifris Remote

- French magisterium on cryptography.

Blockchain Training Program *sep. 2023 → mar. 2024*

MasterZ · AIO Blockchain Lab Remote

- Training course on Blockchain and Distributed Ledger Technology.