

# Alessandro Mileto



I am Alessandro, a Computer Engineer passionate about *systems security and engineering*. I did research on OS virtualization and hypervisor-based OS security. In the years, I also learned about Offensive Security techniques, Cryptography, Machine and Deep Learning and much more and I feel ready to apply my skills to tackle real-world challenges!

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📍 Milan, Italy

🌐 [alessandro-mileto](#)

🔗 [ubersandro](#)

## Education

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- MS Politecnico di Milano** - Computer Science and Engineering (Ingegneria Informatica) Sept. 2021 to April 2024  
Milan, Italy
- Grade: With Honors
  - GPA: 28.95/30 ([Transcript](#))
  - **Thesis title:** *On the Performance of Hypervisor-based Memory Monitoring for Code Unpacking Detection*
- Ext Max Planck Society** - Cornell, Maryland, Max Planck Pre-doctoral Summer School August 2023  
Saarbrücken, Germany
- **Selected** for attendance among about 100 candidates over more than 500
  - Pre-doctoral summer school jointly organized by **Cornell University, Maryland University, Max Planck Institute.**
- Ext NECST Camp** - NECSTLab, Politecnico di Milano Sept. 2022 to January 2023  
Milan, Italy
- Extra-curricular activities to promote personal and professional growth curated by Professor Marco Santambrogio of Politecnico di Milano.
  - Soft skills: social intelligence, psychology and pitching
  - Hard skills: hardware accelerators design (Vivado for LLS, Vitis for HLS, Vitis AI)
- BS Università della Calabria** - Computer Science and Engineering (Ingegneria Informatica) Sept. 2018 to Sept. 2021  
Cosenza, Italy
- Grade: With Honors (and Academic Mention)
  - GPA: 29.02/30 ([Transcript](#))
  - **Thesis title:** *Studio della Sicurezza delle Reti 5G (On the Security of 5G Networks).*

## Working Experience

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- Internship University of California Santa Barbara** - Research Associate Nov. 2024 to April 2025  
Santa Barbara, California, USA
- I will join SECLAB to work as a cybersecurity researcher (field to be defined).
- Collab Fiscal Focus** - Consultant Feb. 2021 - May 2021  
via Alemanni 1, Pianopoli(CZ), 88040
- I realized two digital Courses about **Cloud Computing and Network Security** within the “Industria 4.0” project financed by European Union and promoted by Italian Government.

## Hackathons and CTFs

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### Start Hack 2024, Start Global Hackathon

St. Gallen, Switzerland  
March 2024  
36 hours

- Hackathon about innovation in sustainable agriculture, finance education, tourism, and climate change management.
- We worked on a study case by Syngenta. We proposed Spring Sprout, an app to gamify learning about agriculture with tailor-made insights for learning, challenges, quizzes, recommendations on how to grow crops and contrast diseases
- [Link](https://github.com/AlessandroCogollo/StartHack2024/): <https://github.com/AlessandroCogollo/StartHack2024/>

### GDSC AI Hackathon, Google Developers Students Club's hackathon

Milan, Italy  
April 2024  
24 hours

- Hackathon about the use of AI to support education
- Proposed LearningDuck, an app to suggest students how to approach learning about new topics, starting from AI-generated mindmaps, quizzes, solutions, assessments, and remarks on progress done.
- [Link](https://github.com/NicholasNicolis/GDSC-AI-SpicyLionArancini): <https://github.com/NicholasNicolis/GDSC-AI-SpicyLionArancini>

### Octf, DEF CON pre-qualifier CTF (Capture The Flag)

Milan, Italy  
December 2023  
48 hours

- Played with "Mhackeroni", the biggest Italian hacking super-group under the nickname "ubersandro".
- Worked on Mac OS faulty driver exploitation
- [Link](https://ctftime.org/event/2073/): <https://ctftime.org/event/2073/>

### Nautilus DEF CON Quals '24, DEF CON qualifier CTF (Capture The Flag)

Milan, Italy  
May 2024  
48 hours

- Played with "Mhackeroni", the biggest Italian hacking super-group under the nickname "ubersandro" and **qualified** for the finals.
- Worked on binary exploitation, reverse engineering.
- [Link](https://nautilus.institute/): <https://nautilus.institute/>

## Projects

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### Artificial Neural Networks challenges

Sep. 2022

Two challenges:

- Object Recognition and Classification (CNN, quasi-SVM), Data Augmentation (SMOTE, re-sampling, etc.).
- Time Series Classification (LSTM, RNN, GRU, 1D-CNN), and Data Augmentation (re-sampling, interpolation etc.).

[Link](https://github.com/ubersandro/annHomework1): <https://github.com/ubersandro/annHomework1>

[Link](https://github.com/ubersandro/annHomework2): <https://github.com/ubersandro/annHomework2>

### GANs on FPGA

Sep. 2022

- I accelerated the generation of images on Artix 7 FPGA using Xilinx Vitis AI, Tensorflow and PYNQ.

[Link](https://github.com/ubersandro/GANs-on-FPGA): <https://github.com/ubersandro/GANs-on-FPGA>

### Network Analysis on PGP users dataset

Sep. 2022

- I worked on NetworkX and Gephi to extract insights and data from the biggest connected component of the PGP users network and analyze them.

[Link](https://github.com/ubersandro/PGPusers-dataset-analysis): <https://github.com/ubersandro/PGPusers-dataset-analysis>

## Languages

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- **Italian** (mother tongue)
- **English** (C1 Advanced Certificate in English released by Cambridge Assessment in 2017).

## Technologies

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**Languages:** C, C++ , Java, Python, SQL, Bash, MATLAB

**Software:** Visual Studio, Eclipse, MariaDB, IntelliJ, MATLAB, Linux

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