



## Gabriele Nicolò Costa

**Date of birth:** 05/04/2002 | **Place of birth:** Palermo, Italy | **Nationality:** Italian |

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### ABOUT ME

I completed my Master's degree in Computer Engineering, specializing in Artificial Intelligence, in October 2025, achieving the highest possible grade of 110/110 with honors. I am currently pursuing a Ph.D. at the University of Palermo, focusing on Artificial Intelligence applied to Cybersecurity. My research addresses critical challenges such as adaptive algorithms and Explainable AI for the accountability and interpretability of cybersecurity systems. My goal is to develop the next generation of intelligent and autonomous defense mechanisms to counter emerging cyber threats. I am a problem-solving-oriented individual, open to new challenges and career opportunities in both research and industry.

### WORK EXPERIENCE

 **UNIVERSITÀ DEGLI STUDI DI PALERMO, DEPARTMENT OF ENGINEERING** – PALERMO, ITALY

**POSTGRADUATE SCHOLARSHIP** – 01/05/2025 – 01/11/2025

Research Fellow activity entitled "ADELE: ADaptive Ensemble LEarning for Network Security" carried out at the University of Palermo. The research activity focused on the study and implementation of advanced adaptive and explainable machine learning techniques, in the context of network security in particular in Intrusion Detection Systems (IDS), in order to realize adaptive autonomous systems.

**POSTGRADUATE SCHOLARSHIP** – 01/10/2024 – 01/05/2025

Research Fellowship activity entitled "Study and definition of artificial intelligence techniques to cope with cyber attacks" carried out at the University of Palermo. This research activity focused on studying and implementation of machine and deep learning techniques, in the context of network security, particularly in Intrusion Detection Systems (IDS). The main activities involved studying of the phenomenon of concept drift in network traffic and its effects in systems evaluation. These activities lead to the implementation of a data generator to generate concept drift from a dataset, and the proposal of a new method of systems evaluation, both in offline and online phases.

**PHD STUDENT IN COMPUTER SCIENCE** – 01/11/2025 – CURRENT

PhD position at the University of Palermo in the field of Artificial Intelligence applied in the CyberSecurity domain.

 **ABC SOLUTIONS** – PALERMO, ITALY

**ICT CONSULTANT** – 01/06/2023 – 01/02/2024

Internship activities carried out the company ABC Solutions as an IT consultant, aimed at the implementation of software solutions for business management, based on Odoo technology (a Python framework). The main activities I was involved in: meeting with customers, project management and requirements analysis, implementation of custom software for customer and consulting at customers for the proposal of new solutions.

 **UNIVERSITÀ DI SALAMANCA** – SALAMANCA, SPAIN

**SOFTWARE DEVELOPER** – 01/06/2019 – 01/07/2019

**Erasmus+ Traineeship** activity carried out at the University of Salamanca. The activity focused on the development of an e-learning platform for the faculty of Microbiology, using the Moodle framework.

 **CODING A VISION** – PALERMO, ITALY

## **SOFTWARE DEVELOPER – 01/06/2020 – 01/02/2021**

During this internship, I contributed to the development of a WebApp using the Angular JavaScript framework. The project involved both frontend and backend activities, including the design and implementation of the user interface, the creation of a database to collect and manage dynamic data from the application, and the development of APIs to enable communication between the interface and the database. The internship also included an in-depth study of unstructured databases, focusing on data management and manipulation technologies, as well as key aspects of cybersecurity.

 **BOSCH** – MILANO, ITALY

## **SOFTWARE SOLUTIONS DEVELOPER – 01/07/2019 – 01/08/2019**

Internship activity aimed at the creation of a web platform for the management of a smart parking, in the perspective of the project "Training for the future". The main activities were: study and development of a web platform, both frontend and backend, and development of API to be able to reserve a parking space within the webapp. The platform was designed with Javascript and JQuery frameworks.

## ● **EDUCATION AND TRAINING**

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01/09/2015 – 26/06/2020 Palermo, Italy

### **HIGH SCHOOL DIPLOMA** ITIS A.Volta

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ICT competences, software and web development, software engineering, IT consultant, IT systems and Networking.

**Website** <https://iissvolta.edu.it/> | **Field of study** Information and Communication Technologies |

**Final grade** 100/100 with honors | **Level in EQF** EQF level 4 | **National classification** 4

01/09/2020 – 24/07/2023 Palermo, Italy

### **BACHELOR'S DEGREE IN COMPUTER ENGINEERING (CLASS L-8)** Università degli Studi di Palermo

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**Website** [www.unipa.it](http://www.unipa.it) | **Field of study** Engineering, manufacturing and construction | **Final grade** 110/110 with honors |

**Level in EQF** EQF level 6 | **National classification** 6 | **Number of credits** 180

01/09/2023 – 02/10/2025 Palermo, Italy

### **MASTER'S DEGREE IN COMPUTER ENGINEERING (CLASS LM-32), AI CURRICULUM** Università degli Studi di Palermo

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Curriculum studiorum:

- **BIG DATA C.I.** (12 CFU) ING-INF/05 - **grade 30** (27/06/2024)
- **EMBEDDED SYSTEMS** (6 cfu) ING-INF/05 - **grade 30** (29/01/2024)
- **ARTIFICIAL INTELLIGENCE 1** (9 cfu) ING-INF/05 - **grade 30 cum lode** (31/01/2024)
- **LANGUAGES AND TRANSLATORS** (9 cfu) ING-INF/05 - **grade 30 cum lode** (01/07/2024)
- **ADVANCED NUMERICAL METHODS** (6 cfu) MAT/08 - **grade 30 cum lode** (19/02/2024)
- **COMPUTER VISION** (6 cfu) ING-INF/05 - **grade 30 e lode** (11/07/2024)
- **WEB SYSTEMS DESIGN AND ARCHITECTURE** (6 cfu) ING-INF/05 - **grade 30** (13/06/2024)
- **CYBERSECURITY** (12 cfu) ING-INF/05 - **grade 30 cum lode** (03/03/2025)
- **NATURAL LANGUAGE PROCESSING** (6 cfu) ING-INF/05 - **grade 30** (24/01/2025)
- **ARTIFICIAL INTELLIGENCE 2** (6 cfu) ING-INF/05 - **grade 30 cum lode** (17/01/2025)
- **ROBOTICS** (6 cfu) ING-INF/05 - **grade 30 cum lode** (17/01/2025)
- **INTELLIGENT SIGNAL ANALYSIS** (6 cfu) ING-INF/05 - **grade 29** (13/06/2025)

**Website** <https://www.unipa.it/> | **Field of study** Ingegneria Informatica | **Final grade** 110/110 with honors |

**Level in EQF** EQF level 7 | **National classification** 7 | **Number of credits** 120 |

**Thesis** Design and development of an online system for the prevention and detection of network traffic anomalies

01/11/2025 – CURRENT Palermo, Italy

### **PHD IN COMPUTER SCIENCE** Università degli Studi di Palermo

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**Website** <https://www.unipa.it/> | **Field of study** Information and Communication Technologies (ICTs) not further defined |

**Level in EQF** EQF level 8

● **TECHNICAL CERTIFICATIONS**

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**Systems and Networking**

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- 1. CCNA Routing and Switching: Introduction to Networks
- 2. Google Cloud Platform Fundamentals - Core Infrastructure
- 3. Essential Google Cloud Infrastructure: Core Services
- 4. NDG Linux Unhatched - Cisco Networking Academy
- 5. Cisco Cybersecurity Essentials

● **LANGUAGE SKILLS**

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Mother tongue(s): **ITALIAN**

Other language(s):

|                | UNDERSTANDING |         | SPEAKING          |                    | WRITING |
|----------------|---------------|---------|-------------------|--------------------|---------|
|                | Listening     | Reading | Spoken production | Spoken interaction |         |
| <b>ENGLISH</b> | C1            | C1      | C1                | C1                 | C1      |
| <b>SPANISH</b> | A2            | A2      | A2                | A2                 | A2      |
| <b>CZECH</b>   | A1            | A1      | A1                | A1                 | A1      |

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **SKILLS**

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**Software Development**

Team Managment | MACHINE LEARNING | manage ICT project | database | programming, software engineering, software development | LaTeX (very good) | Web Designing & Web Development | Internet of Things | Software engineering

**Programming**

artificial neural networks | Programming languages (Python, R programming, C programming, Matlab) | natural language processing | ROS - Robot Operating System (Base) | Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation

● **EDUCATIONAL ACTIVITIES AND PROJECTS**

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30/06/2025 – 07/07/2025

**IPSP: Industrial Problem Solving With Phisics**

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Industrial Problem Solving with Physics (IPSP) is an event organized Department of Physics, University of Trento with Confindustria Trento, Trentino Sviluppo and Hub Innovazione Trentino. The purpose of the event is to promote the connection between the world of research the world of business. In the research team, I was involved in applying advanced Graph Theory algorithms to solve a business problem and reduce production costs.

06/03/2025 – 28/05/2025

**CyberChallenge**

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Training course organized by ACN and National CyberSecurity Lab that covers topics related to cryptography, network security and software vulnerabilities, as well as attack and defense techniques.

01/10/2023 – 01/02/2025

**Mobius Robotics**

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Robotics Team formed on 10/2023 on the initiative of some interclass students from the Department of Engineering, University of Palermo. My role was team leader of the computer science section, and as part of the computer science section my main tasks were: computer vision system for visual odometry, artificial intelligence algorithms for action planning, wireless infrastructure for communication of various components.

Accomplishments achieved during the last year:

- participation in the 2025 edition of Sharper Night
- qualification to the international phase of the Eurobot 2024 competition

Link <https://mobius-robotics.github.io/>

01/02/2023 – 01/07/2023

### Erasmus+ Studio

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Erasmus+ Study Abroad experience carried out at the University of Pardubice (Czech Republic). In this experience I acquired the following skills:

- operating systems and management
- web and mobile programming
- electronics, electrical measurements
- basic language course of Czech for foreigners

### Scientific Publications

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- Gabriele Nicolò Costa, Alessandra De Paola, Salvatore Drago, Pierluca Ferraro, Giuseppe Lo Re. *A Concept Drift Stream Generator for Intrusion Detection Systems in Ital IA*. To appear in **Proceedings of Ital-IA 2025**, CEUR Workshop Proceedings, CEUR-WS.org, 2025. ([Ital-IA 2025](#))
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*I authorize the processing of my personal data present in the CV pursuant to Article 13 of Legislative Decree No. 196 of June 30, 2003 - "Code relating to the protection of personal data" and Article 13 of GDPR 679/16 - "European Regulation on the protection of personal data".*

2025



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