

Gabriele Musso

Computer Engineer specializing in Artificial Intelligence

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TECHNICAL SKILLS

- **Artificial Intelligence & Data Science:** Machine Learning, Deep Learning, Natural Language Processing (NLP), Computer Vision, Generative AI (Stable Diffusion, Latent Diffusion Models, Mixture of Experts).
- **Programming Languages:** Python, SQL, C, C++, Java, JavaScript.
- **Systems & Cloud Infrastructure:** Cloud Architectures (AWS), Proxmox VE, Containerization (Docker), VPS (Oracle Cloud), VPN networks.
- **Database & Backend:** PostgreSQL, PostGIS, web frameworks.
- **Cybersecurity & IT:** Infrastructure management and security, SOC analysis, ticketing, troubleshooting.

PROFESSIONAL EXPERIENCE

SmartiLab, University of Palermo

Research Fellow in Machine Learning and Software Development

December 2024 – December 2025

Palermo

- **PMS Design and Development (PNRR Project):** Creation of an intelligent Pavement Management System to predict road surface degradation within a PNRR-funded project. Implementation of Machine Learning and Deep Learning models using **Scikit-learn, PyTorch, and TensorFlow**.
- **Data Engineering & GIS:** Engineering of automated pipelines in Python (via cron jobs) to process metrics from connected vehicles (IRI) and integration with geospatial data (OpenStreetMap).
- **Full-Stack & DevOps:** Development of a web platform with a **Flask** backend and **PostgreSQL/PostGIS** database. Containerization of the entire infrastructure using **Docker** to ensure scalability and rapid deployment.
- **Research & Dissemination:** Co-author of scientific papers for international conferences (TRA, TRB) and technical/logistical management for the organization of the **RoadLCA 2026** conference.

Algios (Start-up)

IT and Cloud Systems Administrator

March 2025 – Present

Palermo

- **Infrastructure & Virtualization:** Administration and maintenance of server architectures based on **Proxmox VE** clusters, optimizing resource allocation and managing corporate backup policies.
- **Networking:** Design of a hybrid architecture using a **WireGuard** VPN tunnel connected to an external VPS with a static IP, enabling secure access to the internal datacenter and allowing DNS services to route traffic correctly.
- **Security & Monitoring:** Infrastructure hardening through careful management of exposed ports on internal Linux firewalls. Implementation of **Grafana** for proactive monitoring of performance and services.

Exprivia

Low-Code App Developer

May 2022 – November 2022

Hybrid

- **Enterprise B2B Development:** Design and implementation of complex Business-to-Business (B2B) architectures and systems using the **Appian** low-code platform, significantly reducing corporate software release times.
- **Certification:** Achieved the official Appian certification following the training and development path on the platform.

Onstairs

SOC Analyst & IT Support

November 2020 – February 2021

On-site

- **Monitoring & Incident Response:** Analysis of security events and management of the corporate ticket lifecycle, ensuring rapid and accurate triage of anomalies.
- **Server Infrastructure:** Installation, configuration, and management of physical servers and virtual machines, ensuring the business continuity of essential services.
- **Technical Support:** IT helpdesk and customer service activities, interfacing directly with clients to resolve hardware and software issues.

Self-Employed / Freelance

Web Developer & IT Consultant

July 2018 – September 2020

Palermo

- Design and development of web applications to help small businesses and professionals enter the digital world.
- IT consulting, technical assistance, and IT support for private and corporate clients.

EDUCATION

University of Palermo

Master's Degree in Computer Engineering – Artificial Intelligence Curriculum

October 2022 – March 2026

Palermo

Experimental Thesis: *Development of a generative multimodal AI system in the biomedical field.*

Design of a system based on **Stable Diffusion (Latent Diffusion Models)** to generate synthetic medical images (CT and PET scans) from magnetic resonance imaging (MRI), supporting medical diagnoses and reducing patients' exposure to radiation. Optimization of the original architecture by implementing the *Instruct-Pix2Pix* framework and introducing a **Mixture of Experts (MoE)** to maximize diagnostic fidelity.

Key Projects: NLP tasks for the classification of conspiratorial texts (EVALITA - ACTI) and advanced Computer Vision algorithms (facial recognition, denoising, calibration using deep neural networks).

University of Palermo

Bachelor's Degree in Computer Engineering

October 2018 – March 2023

Palermo

I.T.I.S. "Vittorio Emanuele III"

High School Diploma in IT

September 2014 – July 2018

Palermo

- **IT Certifications:** Achieved the *(I10) Base System Operator for "IBM i"* certificate.
- **Educational Projects:**
 - Participation in the *"School-Work Alternation: the way to the future"* program in collaboration with **Elis/RAI WAY**.
 - Participation in the *"Learn & teach Tour 2016"* organized by **National Instruments**.

CONFERENCES & WORKSHOPS

Rotary International

RYLA - Rotary Youth Leadership Awards

April 2026

Palermo

- **Corporate Culture & Management:** Attended seminars led by CEOs and entrepreneurs focusing on daily business challenges, risk management, and mitigation strategies.
- **Effective Communication:** Received specific training on optimizing interpersonal and corporate communication, focusing on assertiveness and the constructive management of relational dynamics.
- **Field Business Analysis:** Participated in guided visits to historic local manufacturing companies to analyze real-world case studies related to supply chain operations, procurement, and internal employee communication.

PERSONAL PROJECTS

Home Lab Infrastructure (Cloud & Virtualization)

- Design and maintenance of a home server based on **Proxmox VE** for hosting, virtualization, and containerization (LXC/Docker) of personal IT services.
- Integration of a hybrid infrastructure using an Oracle Cloud VPS as a secure reverse proxy, allowing remote access to services via a VPN tunnel.

CERTIFICAZIONI E CORSI AVANZATI

- **AWS Certified AI Practitioner** – Amazon Web Services (AWS) *September 2025*
- **AWS Certified Cloud Practitioner** – Amazon Web Services (AWS) *August 2025*
- **Apple Foundation Program** – Università degli Studi di Palermo *July 2025*
- **Appian Certified Associate Developer** – Appian *2022*
- **Security Red&Blue & Security Fast Forward** – ONstairs *October 2020*

VOLUNTEER EXPERIENCE

Vivere Ingegneria (UniPA)

2019 – 2023

Participated as an active member of the Vivere Ingegneria student association, organizing events and assisting peers during the early stages of their university life.

LINGUE

- **Italian:** Native
- **English:** B2

INTERESSI

Books, Videogames, Finance.

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