

NICOLA RICCIARDI

— AI & Software Engineer —



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ABOUT

Motivated AI & Software Engineer with a pragmatic approach, developed since high school through personal projects and direct collaborations with local companies.

Alongside my academic studies, these experiences allowed me to develop solid practical expertise and a strong aptitude for solving complex problems in real-world scenarios.

I possess strong team coordination and organizational skills, consistently ensuring goal achievement through effective leadership and methodological precision.

📅 November 2002

📍 Reggio Emilia, IT

🇮🇹 Native

🇬🇧 B2 - UniMoRe English Certificate

SKILLS

AI & ML

PyTorch LLM & MLLM Gymnasium & SB3
Scikit-learn Prophet PettingZoo & RLlib

GENERAL

Python Java C Rust Kotlin
C++ Bash

DATABASE

MySQL Sqlite MS Server MongoDB

FRONTEND

Angular Svelte & SvelteKit Tauri
Bootstrap & Tailwind Blade Flutter

BACKEND

Laravel FastAPI Spring Boot NestJS
MQTT GraphQL Kafka Streams

OTHER

Arduino Docker Prometheus & Grafana

PROFESSIONAL EXPERIENCE

SOFTWARE ENGINEER IN IOT R&D

McRegEm (B810), Reggio Emilia, IT

2021 - Present

Dashboard (Laravel and Angular) for managing remote camper areas with IoT devices.

Distributed IoT devices management system with Java, Kafka Streams and Angular.

INTERNSHIP IN SCALABLE MULTIMODAL LLMs

UniMoRe, Modena, IT 2025 - 2026

Information-efficient Vision Encoder (image processing).

Training of LLaVA (Multimodal LLM text + images) model on a GPU cluster.

INTERNSHIP IN DISTRIBUTED SYSTEMS OF DIGITAL TWINS

UniMoRe, Modena, IT 2023 - 2024

Distributed Digital Twins system for the management of the municipal video surveillance system.

System performance profiling and consumption analysis (Grafana, Prometheus, cAdvisor).

FREELANCER WEB DEVELOPER

Reggio Emilia, IT 2018 - 2021

Management dashboard for internal company data.

Websites for commercial businesses.

EDUCATION

MASTER'S DEGREE IN ARTIFICIAL INTELLIGENCE ENGINEERING

UniMoRe, Modena, IT 2024 - Present

Thesis on efficient Multimodal Large Language Models.

System for digitizing handwritten diagrams using Computer Vision.

System for monitoring and predicting road surface conditions based on IoT sensor data and Machine Learning models.

Drones swarm (Multi-agent RL system) to search for missing persons after incidents.

BACHELOR'S DEGREE IN COMPUTER ENGINEERING 110/110

UniMoRe, Modena, IT 2021 - 2024

Thesis on the development and analysis of a distributed Digital Twins system for managing the municipal video-surveillance system.

HIGH SCHOOL DIPLOMA IN COMPUTER SCIENCE 100/100

Piero Gobetti, Scandiano, IT 2016 - 2021

First-level Cisco certification.

Last updated on February 22, 2025