

# DARIO MAZZA

## Junior Cloud-Native Engineer

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## EXPERIENCE

### Research Assistant Intern (Erasmus+ Traineeship)

Jheronimus Academy of Data Science, 's-Hertogenbosch, Netherlands

`</>` Python Go Terraform TOSCA LangChain/RAG

Feb 2025 – June 2025

- Engineered **ReTOSCA**, a Proof-of-Concept framework to reverse-engineer AWS Terraform configurations into TOSCA 2.0 standards, resolving mapping ambiguities via a deterministic pipeline and Retrieval-Augmented Generation (RAG).
- Implemented full TOSCA 2.0 standard support for the **go-puccini** open-source compiler using Go; the contribution was validated and merged into the official repository used by the global community [\[merged PR\]](#).
- Conducted research on Infrastructure-as-Code (IaC) interoperability, bridging proprietary configurations with open standards through Python and Go automation.

## EDUCATION

### Master's Degree in Computer Science

Università degli Studi di Salerno

Final Grade: 110/110 with honors

Dec 2022 - Oct 2025

- Major in **Software Engineering & IT Management**

### Bachelor's degree in Computer Science

Università degli Studi di Salerno

Final Grade: 110/110 with honors

Sept 2019 - Dec 2022

- Apple Foundation Program:** Secured admission (ranked Top 10 among 65+ applicants) to develop an AR iOS game using Swift and ARKit within a 4-week intensive framework.

## PROJECTS

### Kubernetes Homelab & GitOps Platform

Cloud Native Infrastructure & Automation

`</>` Kubernetes Flux CD Ansible Cilium (eBPF) SOPS Prometheus Linux

[\[code\]](#)

- Architected a declarative bare-metal cluster by implementing **Ansible** for automated OS hardening and **K3s** provisioning, establishing a production-grade environment that eliminates configuration drift.
- Enforced a strict GitOps workflow via **Flux** to automate reconciliation and deployment, integrating **SOPS** for encrypted secret management and **Cilium** for high-performance eBPF networking.

### Apache Commons Validator - DevOps & Code Quality

Software Dependability & CI/CD Optimization

`</>` Docker CI/CD SonarCloud Java EcoCode OWASP

[\[code | docker image | report | presentation\]](#)

- Modernized the CI/CD pipeline by integrating **GitHub Actions** and **Docker**, establishing consistent build environments that streamlined the testing workflow across multiple platforms.
- Enhanced software dependability by orchestrating static analysis via **SonarCloud** and **EcoCode**, resulting in a **13% increase in test coverage** and measurable improvements in maintainability and energy efficiency.

### CodeSmile - Microservices & ML Architecture

AI Engineering & Distributed Systems

`</>` Python Docker FastAPI Local LLM (Qwen2.5) Microservices CI/CD

[\[code | presentation\]](#)

- Contributed to the **official PhD research repository** (linked to a published paper) by implementing **local fine-tuning** of **Qwen2.5-Coder** to detect **ML-specific code smells**, integrated within a **Dockerized FastAPI** microservices architecture.
- Orchestrated a robust CI pipeline integrating Unit, Integration, and System testing, which skyrocketed test coverage from **0% to 82%**, ensuring reliable deployments for the ML-driven features.

## CERTIFICATIONS

### Red Hat Enterprise Linux Automation with Ansible

RH294 - RHA (Ver. 9.0)

Red Hat

Jan 2026

### Getting Started with Linux Fundamentals

RH104 - RHA (Ver. 9.1)

Red Hat

Nov 2025

## SKILLS

### Programming

Python, Go, Java, C, Bash, TypeScript

### Cloud & DevOps

Kubernetes, Ansible, Docker, Flux CD, Helm

### Web & Frameworks

React, Next.js, Astro, FastAPI, Node.js

### Data & Tools

MySQL, MongoDB, Prometheus, Git, GitHub Actions, SonarCloud

### Languages

Italian (Native), English (B2 Level)