

# 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 [\[merged PR\]](#).

## 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

### Bare Metal Kubernetes Homelab

Hybrid Infrastructure & GitOps Automation

Kubernetes Azure Terraform Ansible Flux CD Cilium (eBPF) Prometheus Longhorn Linux

[\[code\]](#)

- Engineered a **hybrid platform** combining bare-metal nodes and **Azure resources** via Terraform and Ansible, establishing a resilient **GitOps workflow** that ensures business continuity via automated **Azure Blob Storage disaster recovery**.
- Enforced **Zero Trust security** by integrating **Microsoft Entra ID (OIDC)** for centralized RBAC and **Azure Key Vault** (via External Secrets) to eliminate hardcoded credentials, aligning the environment with enterprise compliance standards.

### AWS Enterprise & Serverless Architectures

GenAI, FinOps & Reliability Automation

Terraform Python Amazon Bedrock EC2 Lambda RDS DynamoDB CloudFront SNS

[\[code\]](#)

- Built a **GenAI Customer Support Agent** using EC2 and RDS for reliability. Integrated **Amazon Bedrock** to classify user intent automatically, significantly cutting resolution time for high-priority leads.
- Developed a **Serverless FinOps Dashboard** with Lambda and the Cost Explorer API to visualize billing trends. Added anomaly detection to spot budget spikes early and optimize cloud spend.
- Ensured **99.9% availability** for distributed assets by automating backup and uptime checks using S3 Lifecycle policies, DynamoDB logging, and SNS alerts.

### 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, AWS, Azure, Terraform, Ansible, Docker, Flux CD (GitOps), GitHub Actions (CI/CD), Helm

### Web & Frameworks

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

### Data & Tools

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

### Languages

Italian (Native), English (B2 Level)