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   **Red Hat**

🎖 RH294 - RHA (Ver. 9.0)   📅 Jan 2026

Getting Started with Linux Fundamentals   **Red Hat**

🎖 RH104 - RHA (Ver. 9.1)   📅 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)