

LEONARDO VICENTINI

SOFTWARE ENGINEER

Open to relocation across the EU, UK & CH

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Skills

Programming	Go, Python, Java, JavaScript, Bash, SQL
Platform & Cloud	Kubernetes, Kubernetes Operators, OpenAPI, REST APIs, Docker, Helm, AWS, GCP, Azure, Linux
DevOps & MLOps	GitOps, Ansible, CI/CD, Prometheus, Grafana, MLflow, KServe

Education

University of Trento	Trento, Italy
MASTER'S DEGREE IN COMPUTER SCIENCE (ENGLISH) — GRADE: 110/110 WITH HONORS (GPA: 29.73/30)	Sep. 2021 — Mar. 2025
• Relevant courses: Distributed Systems, Cloud Computing, Service Design, Security Testing, Blockchain, Data Mining, HPC	
BACHELOR'S DEGREE IN COMPUTER SCIENCE — GRADE: 106/110	Sep. 2018 — Sep. 2021
• Relevant courses: Algorithms & Data Structures, Software Engineering, OOP, Operating Systems, Databases, Networks, HCI, ML	

Work Experience

Krateo - Cloud platform startup supporting enterprise clients	Verona, Italy (Remote)
SOFTWARE ENGINEER - KUBERNETES, CLOUD & PLATFORM	May 2025 — Jun. 2026
- Owned the end-to-end development of core components of the Kubernetes-based Krateo platform, from design through production. - Built a Postgres-backed caching API layer in Go with RBAC-aware filtering and keyset pagination, eliminating slow on-demand resource queries that degraded frontend UX, cutting latency from ~7s to ~400ms and sustaining 270+ req/s, validated via 150+ load-test runs. - Evolved a Kubernetes Operator framework that auto-generates CRDs and controllers from OpenAPI specs, eliminating hand-written operator code for new API integrations not yet manageable in Kubernetes and isolating failures per resource type. - Independently migrated and extended 2 legacy integrations (Azure DevOps, GitHub) onto the OpenAPI-driven operator framework, growing coverage to 20 production resource types published to the platform marketplace. - Provided rotational L1–L3 support for 4 enterprise deployments spanning 12 Kubernetes clusters (dev/test/prod), diagnosing incidents and performing root cause analysis across clusters, platform components, and external integrations. - Designed, documented, and oversaw rollout of near-zero-downtime platform upgrades across 4 enterprise deployments, validated against replicated client environments and codified into reusable runbooks. - Evaluated frameworks (kagent, Google ADK), memory systems, and MCP/A2A protocols for Krateo Autopilot, a multi-agent system.	
MASTER THESIS RESEARCHER - KUBERNETES, CLOUD & PLATFORM — [PREPRINT]	Oct. 2024 — Apr. 2025
- Integrated Open Policy Agent as a Kubernetes mutating webhook to enforce latency-SLA, GDPR data-residency, and carbon-aware scheduling policies, contributing to a system achieving up to 13% CO2 emission reductions vs. round-robin baseline scheduling. - Developed Helm templates that dynamically select the best-fit VM size and gate on provider and scheduling time to provision VM and networking infrastructure across AWS, GCP, and Azure via native Kubernetes Operators. - Architected and deployed an MLOps pipeline serving ~15 PyTorch carbon-forecasting models using MLflow and KServe on K8s.	
ESA – European Space Agency (European Space Operations Centre)	Darmstadt, Germany
SOFTWARE ENGINEER INTERN - CLOUD & INFRASTRUCTURE	Apr. 2024 — Jul. 2024
- Delivered a GitOps-style Service Status Board with a GitLab CI/CD pipeline enforcing schema validation on incident, intervention, and announcement metadata before publishing, used by 3 Space Mission Operations teams to track critical infrastructure systems. - Designed a Prometheus-based instrumentation layer with self-registering targets, spanning 5 exporter types (OS, Windows, process, network/SNMP, and uptime checks) across 10+ infrastructure sources and 4 Linux distributions. - Built 15 Grafana dashboards visualizing time-series infrastructure metrics and an Alertmanager notification pipeline via Telegram, delivering near real-time health visibility for space mission operations. - Automated secure deployment and TLS provisioning for monitoring agents via Ansible across 10s of VMs in restricted Operations LAN. - Deployed 3 production instances of the monitoring platform using Kubernetes and Helm following a cloud-native architecture.	
FIPIC – Italian Wheelchair Basketball Federation	Rome, Italy (Remote)
SOFTWARE ENGINEER INTERN - BACKEND	Feb. 2021 — Jun. 2021
- Led a team of 4 engineers to develop a federation-wide historical data and multimedia archive, reducing delivery time by ~50% by improving planning, task distribution, and development workflows. - Built an ELK-based data pipeline powering 4 dashboards, and exposed 70+ Node.js REST endpoints over a MySQL database.	

Projects

Multi-level distributed cache

JAVA, AKKA — [CODE REPORT]
- Designed a 2-tier cache hierarchy (client, L2, L1, database) in Akka with 4 message-passing consistency protocols, including a custom 4-phase propose/accept/apply/confirm write protocol guaranteeing no cache observes a stale value system-wide. - Built a bandwidth-aware crash-recovery algorithm that reconciles only stale keys via targeted re-fetch and comparison, plus an HTTP-driven tool that verifies system-wide consistency by cross-checking every cache's state against the database.