

Salvatore Spina

Software Engineer - Backend & Performance · C++

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C++ Software Engineer specializing in backend performance for large-scale, cloud-hosted systems handling millions of transactions daily. 3+ years at Amadeus building and optimizing high-TPS airline shopping and booking infrastructure - taking performance engineering from profiling and root-cause analysis to measurable gains in production. Combines rigorous measurement, AI-assisted development workflows, and pragmatic engineering to drive CPU efficiency, reliability, and long-term maintainability.

EXPERIENCE

Amadeus · Software Engineer - Performance & Optimization

Nov 2024 - Present · France · Hybrid

- Led a cloud cost reduction campaign with direct production impact: 20% CPU reduction · 8% lower response times.
- Introduced a structured performance engineering approach: deep analysis and profiling to identify bottlenecks, translate findings into business impact, and drive targeted optimizations through to production.
- Identified and resolved hot-path, memory, and scalability bottlenecks via Valgrind, flame graphs, targeted benchmarks, and production telemetry.
- Raised observability quality through improved benchmarking workflows, Grafana/Pyroscope dashboards, and measurement discipline - enabling faster, more confident optimization decisions.
- Mentored engineers on performance thinking and system architecture, led code reviews, and drove technical discussions around system behavior and maintainability.

Amadeus · Software Engineer - Core Backend

Mar 2023 - Nov 2024 · France · Hybrid

- Developed and evolved backend features for NDC airline integrations - designing new carrier implementations while preserving production reliability in a C++ library sustaining ~10,000 transactions/second.
- Diagnosed and fixed memory leaks, race conditions, and stability issues - directly reducing production incidents and improving service reliability.
- Modernized legacy modules to C++17/20 standards, improving code maintainability, readability, and long-term extensibility.
- Strengthened CI/CD pipelines via Jenkins, introducing automated memory leak detection and error analysis tooling alongside Grafana monitoring improvements.

TECHNICAL SKILLS

Languages:	C++ (C++17/20) · C · Python · Bash
Performance:	Profiling · Flame Graphs · Valgrind · Google Benchmark · Pyroscope
Infra & Obs.:	Linux · Git · Jenkins · CI/CD · Grafana · Monitoring · Cloud
Practices:	Performance Engineering · TDD · Code Reviews · Mentoring · Agile / Scrum
AI & Tooling:	Agentic AI Workflows · AI-Assisted Development · Prompt Engineering

EDUCATION

42 Nice · 42 Paris · Expert in Computer Architecture - Bac+5, RNCP Level 7

2021 - 2024 · France

Intensive project-based curriculum covering systems programming, algorithms, networking, and databases - strong emphasis on peer learning and autonomous problem-solving.

Specializations: Database & Data Development · Network & Information Systems.