

Francesco De Salvo

Senior Software Engineer

Senior software engineer and solutions architect with deep expertise in designing High-Performance Distributed Systems and Cloud-Native Infrastructure. Specialized in engineering critical, low-latency components in Rust and orchestrating scalable microservices architectures. Proven track record of maximizing cloud resource efficiency and pioneering Server-Driven UI architectures that drastically reduce time-to-market.

KEY ENGINEERING ACHIEVEMENTS

High-Performance Networking & Systems Programming (Rust)

- **Custom Kubernetes Ingress Gateway**: Engineered a high-throughput, asynchronous Proxy Gateway in Rust (using Hyper & Tokio). Designed to replace standard proxies, it implements a K8s Operator for dynamic service discovery, centralized JWT authentication, and distributed Rate Limiting (Redis), resulting in negligible latency overhead.
- **Event-Driven Backbone**: Architected a resilient communication layer using RabbitMQ and Redpanda (Kafka API), ensuring eventual consistency across distributed domains and high-throughput data ingestion across services.

Cloud-Native Infrastructure & Microservices

- **Infrastructure as Code (IaC)**: Designed a fully automated AWS EKS infrastructure managed via Terraform. Integrated Karpenter for high-performance dynamic node provisioning maximizing cluster elasticity, successfully reducing cloud compute costs while maintaining system availability and resilience under load.
- **Microservices & Domain Architecture**: Architected a distributed system based on Domain-Driven Design (DDD) principles. Decoupled complex business logic into isolated services enforcing a Database-per-Service pattern (PostgreSQL/Memgraph), maximizing scalability and fault isolation.
- **GitOps platform**: Engineered custom internal developer tools (CLI/TUI) automating the entire SDLC from secret injection to unit testing and atomic deployments, reducing release times from hours to minutes while improving developer experience.

Mobile Architecture & Framework Development

- **Server-Driven UI Engine**: Designed and implemented a Flutter Server-Driven UI framework (JDUI) that allows the backend to drive mobile UI rendering via JSON configuration, enabling instant Over-The-Air (OTA) interface updates.
- **Automated SDK generation**: Engineered a custom type-safe pipeline that auto-generates client SDKs directly from backend OpenAPI specifications, eliminating contract drift between client and server.

TECHNICAL SKILLS

Languages: Rust (Advanced) , Python, SQL, Dart (Flutter)
Cloud & DevOps: AWS, Kubernetes, Terraform, Docker, Karpenter, ArgoCD
Architecture: Event-Driven Design, gRPC, REST, RabbitMQ, Kafka/Redpanda, microservices
Data & Storage: PostgreSQL, Redis, ClickHouseDB, Memgraph/Neo4j
Mobile: Flutter, Server-Driven UI, Custom SDKs, Platform Channels

LANGUAGES

Italian: Native
English: Full professional proficiency

EMPLOYMENT HISTORY

Boring Stuff SRL — 2 years
CTO / Lead architect — Dec 2023 - Dec 2025

The Waveline — 3 years
Freelance software engineer — Jan 2021 - Dec 2023

4D Sistemi — 1 year
Junior developer — Jun 2019 - Jun 2020

EDUCATION

B.Sc. in Computer Engineering | Politecnico di Milano — present
(concurrently with full-time Senior Engineering roles)

Scientific High School Diploma — 2020

CONTACTS

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