

Gabriel Carvalho Silva

 umgabrielcarvalho.me |  umgabrielcarvalho@gmail.com |  in/umgabrielcarvalho

Spoken Languages: English (Fluent, C2 Level), Portuguese (Native)

Professional Summary

Software Engineer with 5 years of experience developing high-performance distributed systems. Proven experience in Kotlin, Java, and Go ecosystems, specializing in Microservices and Event-Driven Architectures. Track record of designing and scaling high-throughput messaging infrastructure and building internal tooling to empower engineering teams, ensuring reliability, observability, and operational excellence in fast-paced environments.

Technical Skills

Languages: Kotlin, Java, Go (Golang), Python, SQL, Shell Scripting

Architecture & Design: Microservices, Event-Driven Architecture, Domain-Driven Design (DDD), Distributed Systems, SOLID, Schema Evolution

Frameworks & Testing: Spring Boot, Dropwizard, Hibernate/JPA, JUnit, Mockito, FastAPI

Infra & Observability: Kafka, AWS (SQS/SNS), Datadog, Grafana, MQTT, Docker, Kubernetes, CI/CD Pipelines

Databases: PostgreSQL, MySQL, ScyllaDB, Redis, Flyway

Professional Experience

Software Engineer

Mar 2026 – Present

ClassPass - Remote

- **Architecture & Legacy Modernization:** Spearheaded the refactoring of legacy flows to support multi-tenant architectures, enabling the seamless reuse of core business logic across diverse data shapes within a Kotlin microservices ecosystem.
- **Event-Driven Systems:** Architected and implemented complex asynchronous workflows using Event-Driven Architecture (AWS SQS/SNS), utilizing dead-letter queues and strict delivery guarantees to deliver a highly configurable cancellation policy engine and pass-based booking resolutions.
- **Domain-Driven Design (DDD) & Contracts:** Restructured Protobuf service contracts applying DDD and the Open-Closed Principle, defining best practices for schema evolution and significantly improving cross-team maintainability, extensibility, and interface clarity.
- **Data Integration:** Engineered robust tracking and Business Intelligence (BI) integration pipelines, effectively bridging transactional microservices with analytical data layers.
- **Technical Leadership & Culture:** Accelerated ramp-up time by 50% to take ownership of end-to-end technical designs and squad coordination. Fostered engineering excellence by leading design discussions, driving bug bashes, and organizing technical book clubs.
- **Tech Stack:** Kotlin, Dropwizard, PostgreSQL, AWS (SQS/SNS), Protobuf, Microservices

Application Engineer

Oct 2024 – Mar 2026

Foretellix - Remote

- **Lead Technical Integration:** Orchestrated the design and deployment of custom data integration infrastructures for enterprise clients (Toyota, Nvidia), translating high-level business requirements into technical architectural specifications.
- **Cloud Infrastructure Architecture:** Designed scalable execution environments on AWS, integrating industry-standard platforms (e.g., Carla) with proprietary software to ensure high availability.
- **Automation & Tooling:** Developed a custom OpenDRIVE (.xodr) map manipulation API (DOM-like structure) and automation scripts, accelerating map editing workflows and enabling programmatic querying of map elements.
- **Cross-Functional Collaboration:** Acted as the primary technical liaison between internal engineering teams and external business stakeholders, conducting impact assessments and aligning technical delivery with client timelines.
- **Tech Stack:** ASAM OpenScenario 2, C++, Python, Shell, AWS, React, Kotlin

Software Engineer Intern

Feb 2021 – Jan 2023

iFood - Financial Services Tribe | Remote

- **Resilient Architecture & Scale:** Designed fault-tolerant, event-driven financial systems using Kafka to support high-throughput production environments, ensuring data consistency and processing millions of daily transactions with low latency.
- **Internal Tooling & Platform Engineering:** Developed a shared error-handling library (DSL) as an internal developer tool adopted across the platform to standardize user feedback, driving platform engineering initiatives and conducting code reviews to ensure safe adoption.
- **Legacy Modernization:** Contributed to the architectural transformation of legacy payment microservices into modern, resilient Kotlin/Spring Boot applications, enhancing scalability without disrupting business operations.
- **Database Evolution:** Managed database evolution strategies using Flyway and PostgreSQL/ScyllaDB, ensuring zero-downtime migrations for high-volume datasets.
- **Observability:** Integrated observability tools (Datadog/Grafana) to monitor system health and operational visibility, significantly reducing mean-time-to-resolution (MTTR) for payment failures.
- **Tech Stack:** Kotlin, Java, Spring Boot, Kafka, AWS, PostgreSQL, ScyllaDB, Redis, Go (Golang)

Key Projects

Bachelor Thesis - IoT Smart Scale Architecture

Aug 2025 – Dec 2025

USP | Hybrid

- **End-to-End System Design:** Architected a complete IoT solution applying Domain-Driven Design (DDD) and Hexagonal Architecture principles to ensure decoupling and testability.
- **Implementation:** Developed an MQTT broker for real-time device communication, integrated with a Spring Boot/Kotlin backend, SQL database, and embedded face recognition using TensorFlow Lite models.
- **Tech Stack:** ESP32, Mosquitto (MQTT), Kotlin, PostgreSQL, Spring Boot, Docker, React, TensorFlow

Education & Leadership

Universidade de São Paulo (USP)

Mar 2020 – Dec 2025

Bachelor of Computer Science

Technische Universität Braunschweig - Germany

Mar 2023 – Mar 2024

Exchange Student

Leadership

- Octobit Junior - Head of Projects (2024-2025)
- Computer Science Week - Head Director (2020-2021)

Certifications & References

Certifications: TOEFL iBT Score: 113/120 | High School Programming Competition: 2nd Place

References:

- Mr. Cristiano Hahn - Senior Software Engineer @ iFood - cristianohahn.contato@gmail.com
- Mr. Danilo de Luca - Senior Software Engineer @ Classpass - <https://www.linkedin.com/in/danilopereiradeluca>
- Mr. Mohamed Fasil Ahamed - Application Engineering Manager @ Foretellix - <https://www.linkedin.com/in/mohamed-fasil-syed-ahamed-7a146789/>
- Mr. Gianmarco Macaro - Application Engineering Director @ Foretellix - <https://www.linkedin.com/in/gianmarco-macaro-a213367b/>