GERARD BOSCH

Software Engineer
Freelancer/Contractor

Enthusiast about Functional Programming, software engineering/craftsmanship, clean code, architectural/ design patterns and programming languages theory.

Good at identifying inefficiencies, finding solutions and improving processes. I enjoy collaborating with diverse teams to solve challenging problems.

SUMMARY

[📒👀 *Please, read through my best practices and skills* | 📜 *Can also read the extended CV version*]

With a keen interest in Scala and other modern functional languages, my background is mostly about designing/implementing backend systems and APIs. Skilled in analyzing requirements and translating them into code. Focused on code readability, expressiveness, precision, conciseness, and correctness. Committed to continuous improvement & continuous refactor and code reuse as a mantra. Accidental-complexity fighter. Curious by nature, proactive and self-taught. I enjoy contributing to developer experience and building products. Like learning 😃, love crafting ❤️.

EXPERIENCE

Software Engineer - Messaging | Kotlin, Spring, Kafka — Leboncoin (Adevinta), 2025–now

- Support the migration and handover of Adevinta's central messaging (chat) backend platform to Leboncoin, ensuring smooth transition to full ownership and autonomy. The system supports 20M+ monthly active users, tens of millions of conversations per month, and millions of daily messages through an Event-Driven Architecture (Kafka, Kafka Streams).
- Develop new features and modernize the codebase and microservices architecture to meet evolving business and system requirements, improving scalability, reliability, and maintainability.
- Operate, troubleshoot, and optimize the system to ensure high availability, performance, and resilience in a large-scale distributed environment.
- Bridge original and new teams, driving knowledge transfer, collaboration, and alignment for successful migration.

Stack: *Kotlin, Spring Boot, Kafka, Kafka Streams, Kubernetes, ScyllaDB, Postgres, Clickhouse, AWS,...*

Backend Software Engineer | Quarkus, Reactive — Tymit, 2024–2025

🎯 *Authored an RFC with actionable proposals to align the current architecture with Clean Architecture™ & SOLID principles, with a special focus on the Interface Segregation (ISP) and Single Responsibility Principle (SRP), plus other enhancements.*

- Engaged with the integrations team to support the migration of hundreds of thousands of customers into our system, while also developing new public-facing APIs to enable a new business model requiring first-party and third-party B2B backend integrations.
- Improved testing reliability by introducing Property-Based Testing and showcasing its principles to the backend team, ensuring more robust testing including edge-cases, generating thousands of test values.
- Spearheaded API contract segregation into dedicated modules, enabling the publication of versioned API artifacts for seamless and efficient cross-service integration using Gradle, contributing to DX.
- Promoted coding best practices and actively contributed to code reviews and BE discussions.

Stack: *Quarkus, Microservices, Reactive Programming, AWS (ECS, DynamoDB, SQS, SNS, RDS), Liquibase,...*

Software Engineer | C++, MQL — Self employed, 2022–2023

🎯 *Established my own company to provide software engineering services as a contractor.*

- Algorithmic trading, research, design & implementation of a risk management system for loss control, as well as key metrics collection/reporting using DDD & Hexagonal arch.
- High-level design of a multi-level affiliation system with referral fee distribution.
- Took a break to learn about finances, markets, investments and expand Fintech expertise.

Software Engineer | Spring Boot, Kotlin — N26 Bank, 2021–2022

🎯 *Collaborated to streamlining the processing of banking fees with the goal of having a more centralized and clear domain boundaries for charging fees.*

- Joined the Memberships team, which was in charge of designing and operating a new fee platform intended to be the new-standardized way of charging company-wide banking fees.
- This involved creating a dedicated microservice, repurposing and refactoring of existent ones (by DDD/CleanArch), along with APIs, as well as DB migrations.
- Being a bank, testing and security were some of the most important and cared matters (pyramid testing, contract testing, regression, TDD,...).

Stack: *Kotlin, Spring Boot, Microservices, EDA, Kafka, REST, Postgres, Datadog, ELK, AWS,...*

Senior Software Engineer | Spring Boot, Java — GFT IT Consulting, 2016–2021

🎯 *Successfully delivered a large and complex regulatory banking project to provide external, permission-based access to banking APIs, ensuring on-time completion. Then, was called to contribute to building a new bank architecture for high-concurrency from the acquired know-how.*

- *Banc Sabadell*: **Middleware Architecture** (2020–2021) – Redefine from scratch a whole new framework and development environment based on MsA, Spring Boot, API-First, Event Driven, DDD, Hexagonal, and using OKR project framework – **Role**: Software Engineer.
- *Banc Sabadell*: **PSD2 & APIfication** (2018–2020) – Design & implement the APIs and requirements for the European PSD2 regulation; pioneering the API exposition for the Bank. Define and implement architectural components for the MsA. Mentoring and onboarding new members. Got established as the technical lead for the dev team – **Role**: Tech Lead.
- *Bankinter*: **Microservice Architecture** (2017) – Development of an architecture based on MsA and Spring, providing the pre-configured components: from security, tracing, audit, error handling to cryptography; enabling developers to easily get started.

Software Engineer | Mobile development — ICG Software, 2015–2016

- Developed a new Android-native warehouse management app, featuring barcode scanning, offline operation, an object database with Realm, and integration with the in-house developed ERP.
- Successfully migrated a whole app for a franchise clothing store to native Windows Phone. Our client needed that we develop our Android app for Windows Phone, to deploy it globally on all their stores.

Researcher/developer | Python — AI Research Institute IIIA-CSIC, 2012–2013

NEWMATICA: Intelligent and Energy Efficient Advanced System for Vacuum Waste Collection.

- Investigated Machine Learning algorithms based on *Approximate Dynamic Programming* (RL).
- Co-developed a waste collecting simulator to optimize operational plans, run simulations, collect data and process results.

Presentations

2020 Functional Programming super-short intro
2018 A technical introduction to Blockchain technology

EDUCATION *(to see more, view the cv version)*

M.Sc. Open Source Software Eng. — University of Lleida (ES) / VIA UC (DK), 2011

- Master Thesis: *Setting up and deployment of Sauron system for DNS system management at University of Lleida*. Mobility internship program at *VIA UC*, Denmark.

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CONTACT

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PROGRAMMING LANG

Scala 3 ★★★★★
Kotlin ★★★★★
Java 23 ★★★★★
Haskell ★★★★★
Bash ★★★★★
Python ★★★★★
Perl ★★★★★

TECHNOLOGIES

Spring Boot · Vavr · oAuth/JWT
Cloud-Native / AWS · Docker / Podman
Kafka, Kafka Streams
SQL · JOOQ · API First & OpenAPI
OpenShift · Cloudflare
Devcontainers · Testcontainers
Maven/Gradle/sbt · JGitVer

TOOLS

IntelliJ / VSCode / vim :)
GitHub Actions · GitLab CI · Jenkins
Git · ZSH · Codestream
CI/CD · Linux · Nix

METHODOLOGIES

- Agile, OKR, SCRUM, Kanban
- TDD, Property-Based Testing, Mutation Testing
- Domain Driven Design, Hexagonal, Clean Architecture
- API-First, OpenAPI, API Management, API Governance
- Microservices, Event-Driven Architecture
- SOLID, Design Patterns, Refactoring, eXtreme Programming

IN GRAPHICS...