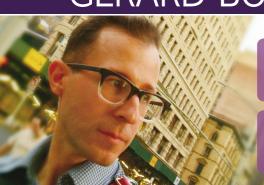
# GERARD BOSCH

# 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 solution 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  $\ensuremath{\mathfrak{U}}$ , love crafting  $\ensuremath{\mathfrak{V}}$ .

#### >>> EXPERIENCE

#### 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 $\mid$ 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 developed our Android app for Windows Phone, to deploy it globally on all their stores.

## Researcher/developer | Python

Al 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.

### CONTACT

- US/EU Worldwide remote
- gerard.bosch@gmail.com
- in linkedin.com/in/gerard-bosch

#### PROGRAMMING LANG

Scala 3 ★★★★
Kotlin ★★★★
Java 23 ★★★★
Haskell ★★★★

Bash ★★★★ Python ★★★★ Perl ★★★★

#### **TECHNOLOGIES**

- Spring Boot 
  Vavr P oAuth/JWT
- Cloud-Native / AWS 👛 Docker / Podman
- SQL JOOQ API First & OpenAPI

  OpenShift Cloudflare
  - Coudinate
  - Devcontainers→ Testcontainers→ Maven/Gradle/sbt☒ JGitVer

#### TOOLS

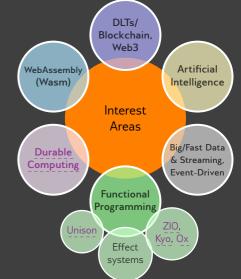
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  Intellij / VSCode / vim :)
- 🜎 GitHub Actions 💔 GitLab Cl 🧟 Jenkins
  - ♀ Git ► ZSH Codestream
  - r de l'CD 🐧 Linux 💝 Nix

#### **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...





町区 source of this *résumé* is available at 😯 github.com/gerardbosch/resume · Built/Delivered by GH Actions/Cloudflare · Last updated: February 25, 2025