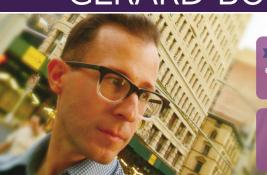
# GERARD BOSCH

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

[ ] •• Read more about my best practices and skills | ] 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  $\ensuremath{\mathfrak{Q}}$ , love crafting  $\ensuremath{\mathfrak{Q}}$ .

#### >>> 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.
- Shared 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 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 v

# 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 ★★★★
Python ★★★★

# **TECHNOLOGIES**

Perl

Spring Boot 
Vavr P oAuth/JWT

- Cloud-Native / AWS 🐡 Docker
- SQL 👬 API First & OpenAPI

#### **TOOLS**

</> Intellij / VSCode / vim :)

- - P Git > ZSH Codestream
     CI/CD Linux Nix

#### **METHODOLOGIES**

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

# IN GRAPHICS...

DevOps

Contributed Programming

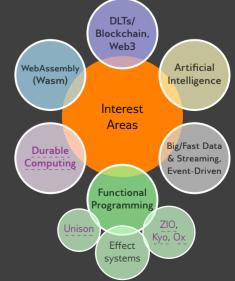
Reactive Programming

Reactive Programming

Architectural Patterns

April Coling Patterns

Tooling Patter



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