

Arnaud Gourlay

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My areas of interests are Rust, distributed systems and databases.

I am interested in roles for which I am not already ticking all the boxes in order to have room for technical growth.

I enjoy working in small teams and having a high impact on the product from design to production.

Technical Skills

Likes: rust distributed-system open-source

Experience

Jan 2022 → *Current* **Rust software engineer** – [Qdrant](#)
rust

Qdrant is an Open Source vector similarity engine deployed as an API service providing search for the nearest high-dimensional vectors.

TBD

<https://github.com/qdrant/qdrant/pulls?q=is%3Apr+author%3Aagourlay+>

Sep 2020 → *Dec 2021* **Scala software engineer** – [Fauna, Inc.](#)
scala, distributed-system, calvin, graphql, kubernetes

Fauna is a flexible, developer-friendly, transactional database delivered as a secure, web-native API. Users do not need to worry about database provisioning, maintenance, scaling, sharding, replication, or correctness.

Member of the "Database core Team" which is responsible for the services that manage customer data:

- Add features to the Fauna Query Language (FQL).
- Improve reliability and observability of the GraphQL layer.
- Contribute to the open source [JVM drivers](#):
 - expose new FQL features.
 - setup client side streaming infrastructure.
- Strive to improve system performance:
 - JVM profiling.
 - micro benchmarking (sbt-jmh).
 - OSS contributions to dependencies (Scala, Sangria).
- Part of the on-call rotation:
 - handle customer escalations.
 - creation of runbooks.
 - redaction of postmortem analysis.
- Experience in a globally distributed team with remote-first culture.

Nov 2014 → Aug 2020 **Scala software Engineer** – [commercetools](#)

scala, event-sourcing, cqrs, functional-programming, mongodb, elasticsearch, graphql, multi-tenant, kubernetes

commercetools is a vendor for cloud-based commerce technology providing an API first multi-tenant platform which can realize complex commerce models.

- Design, implementation and maintenance user facing features:
 - Scala services on top of MongoDB and Elasticsearch
 - using CQRS and event sourcing
- Improvement of system performance:
 - JVM profiling
 - micro benchmarking (sbt-jmh)
 - rewriting component using a streaming approach (akka-stream)
- Hands-on experience on incident management:
 - troubleshooting distributed systems
 - internal communication and postmortem
- Creation of the [cornichon](#) testing library to perform integration testing:
 - used by several teams internally
 - 1500+ scenarios executed on each pull-request
 - presented at the local Scala meetup
- Involvement in the setup of the observability infrastructure:
 - migration from Graphite to InfluxDB and Prometheus
 - hands-on experience crafting Grafana dashboards
- Participation in the recruiting process for various internal positions:
 - conducting interviews for Scala backend developer positions
- Mentoring of junior developers and coaching of senior engineers:
 - regular 1 on 1
 - personal development and career growth

Sep 2013 → Sep 2014 **Java software engineer** – [Zalando](#)

java, spring, postgresql, maven, stored-procedures

Zalando is a multinational e-commerce company that specializes in selling shoes, clothing and other fashion and lifestyle products online.

Part of the logistic department which handles the life-cycle of orders within multiples warehouses.

Member of the "Logistic Core Team" which is responsible for:

- Designing and leading the application's architecture.
- Improving and maintaining the core components.
- Communicating best practices for development tools and workflows.
- Providing support to developer teams.

Jan 2010 → Jul 2013 **Java software engineer** – [Excilys in Paris](#)

java, spring, hibernate, maven, javascript

various consulting positions, incl.

- **Cap Gemini** *June 2012 to mars 2013*

Project Faeton for the French ministry of the Interior. Following an European directive, Faeton is the new platform to manage the complete cycle of driving licences in France.

I was part of the team responsible for offering an history service to Administrations and Police that displays the history of a driving licence. (points, felony, training...)

Designed a solution based on data transformation and evangelized team on the use of Guava for functional programming.

- **Accelya** *avril 2010 to september 2011*

Working on the Dilicom web site which connects book editors to book distributors. It offers most of the features of an e-commerce platform.

During this time I acquired most of my Spring related knowledge as the architecture was using it heavily (ioc, mvc, aop, security, jmx)

2004 → 2009 **Information Technologies Management** – Engineering School - EPF (France)
logic, math, physics, algorithm, learning-to-learn

Certifications

2013 → 2013 **Coursera - Principles of Reactive Programming - 100%**
scala, akka, functional-programming, reactive-programming

2012 → 2012 **Coursera - Functional Programming Principles in Scala - 87%**
scala, functional-programming

Projects & Interests

Jan 2021 → Current **hprof-slurp** – <https://github.com/agourlay/hprof-slurp>
rust, nom, hprof

CLI analyzing JVM heap dumps using the binary hprof format.

Jul 2020 → Current **ray-tracer** – <https://github.com/agourlay/ray-tracer>
rust, raytracing

Implementation in Rust of a ray tracer following "The Ray Tracer Challenge" book.

Nov 2019 → Current **d1m** – <https://github.com/agourlay/d1m>
rust, tokio

Minimal HTTP download manager

Jul 2015 → Current **cornichon** – <https://github.com/agourlay/cornichon>
scala, parboiled2, circe, http4s, cats-effect

An extensible Scala DSL for testing JSON HTTP APIs.

<http://agourlay.github.io/cornichon/>

<https://speakerdeck.com/agourlay/cornichon-a-scala-dsl-for-testing-http-json-api>

Public Artifacts

Jan 2017 **Cornichon - A scala DSL for testing HTTP JSON API** – <https://speakerdeck.com/agourlay/cornichon-a-scala-dsl-for-testing-http-json-api>
scala

Presented Cornichon at the Berlin Scala User Group