Kajetan Rzepecki

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Resumé *(as of September 2, 2021)*

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Skills & Qualifications

spoken languages	**English** (CEFR C1, FCE certified), German (CEFR B1, self-study), Polish (native)
software design	**Functional Programming**, Microservices, OOD, REST, SOA
programming	C/C++, **Clojure**, Erlang/OTP, Java, PostgreSQL, Python, **Scala/Akka/ZIO**, Scheme
web related	JavaScript, **React**, **Redux**, **TypeScript**, WebRTC
toolchain	Ansible, **Docker**, **Emacs**, **Git**, **GNU/Linux**, LaTeX
workflow	**Agile**, Continuous Integration, Gamification, **GTD**, Org-Mode, Atlassian Jira
others	Liability insurance covering the EU, Great work ethic, Very good remote work setup

Software Development Experience

Spartan Works

2016-05 – present **Founder**

Current focus is **full-stack development** and **product management** consultancy in various fields of the industry. Internal projects involve programming language research & development as well as hardware design.

StackState BV (Xebia Group)

2021-05 – present **Product Owner / Senior Fullstack Engineer**, *Consultant*

I decided to involve myself more with the full product lifecycle. Main responsibilities:

- Preparing and ordering the feature roadmap according to customer preferences.
- Specifying, defining and refining user-facing features in the core product.
- Holding refinements and other meetings with the engineering feature teams.
- Developing and maintaining company's core product's backend using Scala, Akka and ZIO.
- Building and maintaining a frontend application using TypeScript, React and Redux.

Main achievements:

- Introduced a proper product management workflow to the company's product team.
- Managed an interactive playground & SaaS trials project from initial idea to a successful launch.

2018-03 – 2021-05 **Senior Fullstack Engineer**, *Consultant*

I was helping to make IT Operations accessible and pleasant. Main responsibilities:

- Developing and maintaining company's core product's backend using Scala, Akka and ZIO.
- Building and maintaining a frontend application using TypeScript, React and Redux.
- Integrating various data sources, including ElasticSearch, Splunk, AWS CloudWatch and Azure Monitor.
- Integrating an in-house built AI solutions into the product.

Main achievements:

- Helped the company to successfully ebrace remote work culture.
- Improved backend security by introducing Groovy script sandboxing and Java Security Manager policies.
- Architected and implemented a flexible system of plugins - StackPacks.

Coya AG

2017-10 – 2018-02 **Senior Fullstack Engineer**, *Consultant*

I helped create a next-generation insurance company. Main responsibilities:

- Developing and maintaining core microservices using Scala/Akka and Cats.
- Introducing Wartremover to the backend code.
- Building a responsive frontend application using Elm.
- Integrating Stripe.js into the frontend application.

Ratel.io (Contactis Group Sp. z o. o.)

2016-05 – 2017-10 **Senior Fullstack Engineer**, *Consultant*

I was building an AI- & WebRTC-powered VoIP communications platform - Ratel. Main responsibilities:

- Architecting, setting up & maintaining the Ratel infrastructure using Docker and Ansible.
- Developing and maintaining several core microservices using Scala/Akka, Cats and PostgreSQL.
- Building and maintaining a WebRTC-heavy, JavaScript-transpiled TypeScript SDK.
- Developing a frontend application using TypeScript, React & Redux.
- Interviewing and mentoring new developers.

Main achievements:

- Introduced Wartremover and Scalastyle to most of the backend code to improve code quality.
- Built an open-source product SDK of which I am still a majority contributor.

Ubiquiti Networks Poland

2014-10 – 2015-12 **Software Developer**, *Payments team*

I was developing the UCRM product (formerly airCRM) for Ubiquiti's WISP customers. Main responsibilities:

- Developing and maintaining a PCI-DSS-compliant payments processor in Clojure/Ring and PostgreSQL.
- Integrating with Authorize.Net, Stripe and PayPal payment gateways.
- Integrating payments with the rest of the UCRM billing system.
- Maintaining and refactoring of several other microservices in Python/Django as well as Erlang/OTP.

Open Source projects

2015-01 – present **The `Spartan` programming language**

A programming language compiler & runtime environment I started developing during my masters thesis research, which I later released as an open source project. Its goal is to create a spartan compiler & a runtime system for a Lisp-like language, useful as a playground for testing new programming language features.

2015-11 – 2016-03 **λ-blog**

A static site generator *generator* written in **Clojure** & JavaScript emphasizing **customizability** & **hackability**. It features: composable HTML generators, Twitter Bootstrap, Markdown support & a hacker-friendly way to **override anything and everything** without much hassle.

2013-05 – 2014-08 **Hive & Flood**, *Zadane.pl sp. z o.o.*

Hive is a highly scalable, Socket.IO-based Erlang web server designed to be used as a back-bone for various modular **Comet applications**. It provides an easy client session management, fast **Publisher/Subscriber** channels and a robust **plugins facility**. *Flood* is a complimentary, fully-featured load simulator suitable for automated Comet application stress-testing in a **continuous integration** environment.

Education

2014-02 – 2015-09 **Master of Engineering in Computer Science:**
Engineering of Intelligent Systems,
Faculty of Electrical Engineering, Automatics, Computer Science and Biomedical Engineering,
AGH University of Science and Technology, Kraków, Poland

thesis title **Design of a programming language with support for distributed computing on heterogenous platforms.**

description Project aims to develop a *platform aware* (as opposed to platform independent) programming language for distributed computing with automatic knowledge propagation in a highly dynamic, redundant & heterogenous environment such as the Internet of Things.

thesis grade **5.0**/5.0

final grade **4.5**/5.0

2010-10 – 2014-02 **Bachelor of Engineering in Computer Science**,
Faculty of Electrical Engineering, Automatics, Computer Science and Biomedical Engineering,
AGH University of Science and Technology, Kraków, Poland

thesis title **Implementation of a virtual machine for functional programming languages with support for concurrent computing.**

description Project based on the Three Instruction Machine (TIM abstract machine) with Actor Model extentions aiming for memory safety and high-speed asynchronous communication with no memory copying.

thesis grade **5.0**/5.0

final grade **4.5**/5.0

Hobbies

- Experimental computer archaeology
- Electronics & hardware design
- Programming Language design
- 3D printing & modeling