

Kajetan Rzepecki

[ka'jetan zɛ'petʂci]

Resumé (as of March 1, 2018)

📍 Cracow, Poland

🏠 www.idorobots.org

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Skills & Qualifications

spoken languages	English (CEFR C1, FCE certified), German (CEFR B1, self-study), Polish (native)
software design	Actor Model, Functional Programming, Microservices , OOD, REST, SOA
programming	C/C++ , Clojure , D, Erlang/OTP, Java, PostgreSQL, Python, Scala/Akka, Scheme
web related	Comet/Push, Elm, Flux, JavaScript, React, TypeScript , WebRTC , WebSockets
electronics	AVR, Eagle CAD , ESP8266 , GHDL/gtkWave, Lab Equipment Usage, VHDL
toolchain	Ansible, Emacs , Docker, Git , GNU/Linux , L^AT_EX , Subversion
workflow	Agile, Continuous Integration , Gamification, GTD , Org-Mode
devops	Docker, Grafana, Kibana, Ansible , Vagrant

Software Development Experience

Spartan Works

2016-05 – present **Founder**

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

Coya AG

2017-10 – 2018-02 **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 **Software 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.
- Introducing Wartremover and Scalastyle to most of the backend code.
- 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.

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.

Brainly.com (Zadane.pl Sp. z o. o.)

2014-05 – 2014-08 **Erlang Developer / DevOps, Acceleration team**

Main responsibilities:

- Stress-testing, refactoring and fixing uncovered bugs.
- Creating Ansible provisioning scripts for automated Hive deployment.

2013-05 – 2013-09 **Erlang Developer Intern, Acceleration team**

I was optimizing the company's main products' backend - a Comet/PUSH server. Main responsibilities:

- Developing and maintaining a generic Socket.IO server called Hive, using Erlang/OTP and Redis.
- Building a custom, highly parallel stress-testing tool, Flood, along with various test scenario scripts.
- Writing detailed technical documentation using **L^AT_EX**.
- Preparing an Open-Source release of both Hive & Flood.

Open Source projects

- 2017-09 – present **Spartan Sensor Mesh**
An ESP8266 microcontroller-based mesh network that presents various sensor readings in a clean and readable fashion. The firmware, consisting of a **multi-tasking OS** and sensor drivers, is written in C++, while the **on-chip-hosted, responsive UI** is written in TypeScript using Preact & Mobx. It supports many different sensors and is fairly easy to setup.
- 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.
- 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.

Hobbies

- Experimental computer archaeology
- Electronics & hardware design
- Programming Language design
- GTD techniques & Gamification