

Mateusz “Serafin” Gajewski

Experienced Software Engineer • Architect

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“If you are not improving, entropy guarantees that you are actually getting worse.”

— Gene Kim, *The Phoenix Project*

Summary

I am experienced software engineer & architect interested in designing and building high quality, scalable, low-latency, distributed systems. I code in various languages - focusing mostly on the backend side (Golang, JVM languages) and always trying to find the right tool to solve given problem. In everyday work I follow principles of [Agile Development](#) and [Software Craftsmanship](#). Up-to-date list of publications, certifications, attended conferences and courses is available on [my LinkedIn profile](#).

Experience

09.2015 – present

ALLEGRO GROUP

Solutions Architect (Marketing, Advertising & Content Systems)

Poznań, Warsaw

Summary: After successfully rewriting major parts of the legacy system, I’ve moved to another business area to start working on new, greenfield projects.

Not yet to be disclosed

New project, I’m currently involved in, requires processing large datasets and handling high volume of traffic (20K+ RPS) with sub-second latency. While in project I am responsible for business requirements analysis, overall system architecture, selection of technologies and building various *Proof of Concepts*. I am spending most of my time coding, mentoring and conducting internal trainings. I am also working with infrastructure teams on pet projects to extend our [Mesos](#) infrastructure with features like container to [exclusive CPU pinning](#). Project is deployed on production (*shadow deployment*) and will be generally available to end users in Q4 2017.

Technologies¹: [ECMAScript 6](#), [Golang](#), [hwloc](#), [Kotlin](#), [React.js](#) and [Redux](#)

07.2013 – 08.2015

ALLEGRO GROUP

Solutions Architect (Financial & Payments Systems)

Poznań, Warsaw

Summary: After failed *New Platform Project* I’ve taken an attempt to work out foundations of a new, fine-grained SOA architecture (*microservices*).

PROJECT RUBICON

Project Rubicon was the attempt to rewrite Allegro’s legacy system (8M+ LoC in PHP/C/C++) into scalable, microservices based architecture (JVM-based). I was the co-author of initial requirements and high/medium level architecture of the whole system. As the result I was honored to become first Solutions Architect in the company. During 2 year period I worked with 6 agile teams from 2 different locations and 2 business domains (finance and payments) to rewrite parts of the old system into new architecture. In the finance domain we had successfully deployed new billing, invoicing, debt collecting, pricing and discounting services into production. Whereas in the payments domain we’ve managed to built from the ground up new integration with external PSP ([PayU](#)) reducing overall complexity of the system, number of integration protocols used and leading to new integrations (i.e. with [PayPal](#) for the purpose of [allegro.de](#) project). During the project I was responsible for the architecture, performance and capacity of new services and quality of the code. I’ve also conducted multiple internal trainings on new technologies, frameworks and languages.

Technologies¹: [Gradle](#), [Java 8](#), [Kafka](#), [Hystrix](#), [Marathon](#), [Mesos](#), [RxJava](#), [Spark](#), [Spring Boot](#) and [Spock](#)

11.2011 – 06.2013

ALLEGRO GROUP

Expert Programmer

Poznań

Summary: While working in Maintenance Team I've gained deep understanding of platform's bottlenecks and limitations. Having that knowledge I have moved to a team responsible for working out new directions of Allegro's platform evolution.

NEW ALLEGRO PLATFORM

Main goal of the project was to identify possible ways of rewriting core Allegro's platform written in PHP 4.x. During course of several months as a scrum team member I've implemented various PoC's in PHP 5.x, Java 6 and C and we have successfully deployed rewritten parts of the platform. In the end project was shut down but as a result of it, my team's recommendation was to focus on high level architecture of the whole platform rather than just changing application-level architecture and frameworks used.

Technologies¹: [Cassandra](#), [Java 6](#), [Guice](#), [Hadoop](#), [HBase](#), [MongoDB](#), [OpenStack](#), [Protobuf](#), [Puppet](#), [Symfony](#) and [ZooKeeper](#)

06.2009 – 10.2011

ALLEGRO GROUP

Programmer • Senior Programmer • Application Incident Manager

Poznań

Summary: As a member of Maintenance Team I was asked to design and implement Incident Management process according to ITIL v3 best practices. During 2 years period I've been handling major incidents and failures, preparing and testing switchover and failover procedures and refactoring parts of the system to increase both overall performance and stability.

HAILSTORM

Project Hailstorm was successful effort to increase overall platform capacity by sharding main Oracle database and moving most of the data operations to the application level. During the course of the project I've designed and implemented task queueing system (CAST) that allowed asynchronous processing of users' requests. As of Q1 2016 CAST processed $9 * 10^9$ tasks and is being deprecated in favor of [Hermes](#) system which I also designed.

Technologies¹: [Gearmand](#), [Oracle 10g & 11g](#), [PHP](#) and [C](#)

Education

2009–2013

Bachelor of Science (B.Sc.)

Poznan University of Technology, Computer Science, Faculty of Computing

THESIS: WEBPAGE PERFORMANCE MEASUREMENT SYSTEM

Bachelor's Thesis project goal was to measure end-to-end web pages latency (full DOM rendering) using headless browser engine from many distinct Internet locations.

Technologies: [Java 7](#), [Guice](#), [Tomcat](#), [Phantom.js](#), [YSlow](#) and [Node.js](#)

Activities

During my free time, I enjoy listening to [music](#), watching TV shows, attending concerts and traveling to distant destinations. I socialize with people a lot and engage in various community events like empowerment programmes, conferences, meetups and startup weekends (also as a mentor). Occasionally I give [public speeches](#) on various topics and help [organize meetups](#) for the community.

I hereby agree for using the personal data included in my job application as required by the recruiting process.

¹Selected new technologies over the past projects