

# 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 an 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](#) both to enjoy work and deliver high quality solutions. Up-to-date list of publications, certifications, attended conferences and courses are available on [my LinkedIn profile](#).

## Experience

09.2015 – present

### ALLEGRO GROUP

**Solutions Architect & Team Lead (Marketing, Advertising & Content Systems)**    Poznań, Warsaw

Summary: After successfully rewriting major parts of the legacy system, I transferred to another department to develop new greenfield projects.

### *Not yet to be disclosed*

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

Technologies<sup>1</sup>: [ECMAScript 6](#), [Golang](#), [hwloc](#), [Kotlin](#), [React.js](#) and [Redux](#)

07.2013 – 08.2015

### ALLEGRO GROUP

**Solutions Architect (Financial & Payments Systems)**

Poznań, Warsaw

Summary: After *New Platform Project* I’ve taken on the challenge 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 the 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. Upon completion I was honored to become first Solutions Architect in the company. During the 2 year period I worked with 6 agile teams from 2 different locations and 2 business domains (finance and payments) to rewrite pieces 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 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, capacity of new services and quality of the code. I’ve conducted multiple internal training sessions on new technologies, frameworks and languages.

Technologies<sup>1</sup>: [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 within the Maintenance Team I've gained a deep understanding of platform 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

The main goal of the project was to identify possible ways of rewriting core Allegro platform written in PHP 4.x. During the 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 integrated rewritten parts of the platform. In the end the 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.

Technologies<sup>1</sup>: [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 the 2 years period I handled major incidents and failures, prepared and tested switchover and failover procedures, refactored parts of the system to increase both overall performance and stability.

#### HAILSTORM

Project Hailstorm was a 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.

Technologies<sup>1</sup>: [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.*

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<sup>1</sup>Selected new technologies over the past projects