

Ilya Zinkovich

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I have 6-years of professional experience in software engineering, building reliable, performant, and secure backend services mainly in Java on AWS. I deliver impactful large-scale technical projects end-to-end in a fast-paced environment, manage technical quality, lead efficient and innovative product-development teams.

WORK EXPERIENCE

Careem

Berlin, Germany

Senior Software Engineer at Marketplace Matching

January 2020 - Present

I am a Tech Lead in a team of 3 Software Engineers and a Data Scientist optimizing matching algorithms for the food delivery service. I focus on organizing and streamlining product development; lead complex technical projects end-to-end; interview, onboard, and mentor other software engineers.

- Developed the **delayed assignment** algorithm that reduced the food delivery time by 10%.
- Developed the **dynamic batching** of incoming orders using Redis that, in conjunction with a **domain-specific matching** algorithm, increased couriers' efficiency by 5%.
- Developed the **pooling** of incoming orders for high-demand restaurants increasing couriers' efficiency by 30%.
- Built a lightweight **engineering process** reducing the average delivery cycle time from 7 to 3 days. Fostered a culture of writing standardized solution **specification documents** that formed an essential knowledge base and evolved into the team's **strategy and vision**.

Software Engineer at Marketplace Matching

2019 - January 2020

I joined the team to stabilize matching services with high availability requirements and active feature development. I focused on service reliability and operational excellence; led ambitious infrastructure projects end-to-end; designed and developed developer tools for testing; cultivated best DevOps practices.

- Re-designed a critical part of the matching system to perform **deterministic assignments in the concurrent environment** using DynamoDB. Fully decommissioned the legacy service with its message queues and distributed locks simplifying the system architecture and cutting costs by 30%.
- Developed **stress-testing tools** based on JMeter, WireMock, and Terraform to analyze the reliability and performance of the matching services. I tested failure scenarios at the comfort of the staging environment, identified flaws in the circuit breaker configuration, tuned garbage collection, and verified the production-readiness of the major architecture changes.
- **Containerized** Java and Spring-based web services using Docker, preparing them for the migration from ElasticBeanstalk to Kubernetes.
- Set up **monitoring and alerting** for the matching services using Prometheus and Grafana.
- Constructed **CI/CD** pipelines on Jenkins with automated infrastructure provisioning using Python and Terraform.
- Led the AWS **cost-saving** effort. Adopted spot instances in the staging environment and implemented the scheduled scaledown saving 70% of EC2 costs.
- Participated in the **on-call** rotation handling critical overnight incidents and writing high-quality incident reports.

I focused on a strategic initiative to enable multi-region deployments of the infrastructure and services.

- Developed a **sharding key populator** job for one of the largest MySQL installations on AWS. Recreated the sharding key for the billions of existing database records and built an SDK to populate it for the new ones automatically.
- Developed **sharding, rate-limiting, and monitoring** of the incoming requests for the Zuul-based API gateway.

EPAM Systems

Minsk, Belarus

Senior Software Engineer at Legal Q&A

2017 - 2018

- **Migrated a legacy Sharepoint portal** to the newly created web app based on Spring Boot, AngularJS, and Oracle DB. Led the team of 3 Software Engineers and a Test Automation Engineer.

Software Engineer at Practical Law UK and Westlaw UK

2016 - 2017

- Developed **search autocomplete** using Elasticsearch.
- Integrated diverse **search, alerting, and research-organizer functionality** into the new suite of legal Thomson Reuters products.

Junior Software Engineer at WestlawNext

2015 - 2016

- Fixed **critical bugs** in search, alerting, research-organizer, and cross-reference services.

EDUCATION

Belarusian State University

Minsk, Belarus

Bachelor of Science in Applied Mathematics and Computer Science

2012 - 2017

TECHNICAL SKILLS

- **Languages:** Java, Kotlin, Python.
- **Technologies:** Spring, Ktor, AWS, Kubernetes.
- **Other:** DDD, FP, OOP, microservices, API design, relational and non-relational databases, caching, async messaging, observability, CI/CD, infrastructure-as-code.

COMMUNITY WORK

- Technical blogging on ilyazinkovich.github.io. Popular articles include [Caching Without Compromises](#) and [Spring](#) and [Demystifying the Magic of @Async](#).
- Q&A on [StackOverflow](#). I answer questions mainly on [Spring](#) and [reactive programming](#) topics.

CERTIFICATIONS

- [AWS Solution Architect - Associate](#).