

# Rafael Bagmanov

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## Summary

**Principal Software Engineer & Tech Lead** with a track record of architecting and optimizing **large-scale distributed systems** handling **petabytes of data** daily. Experienced in leading cross-functional teams, building scalable infrastructure, and optimizing system performance. Strong expertise in multithreading, performance tuning, functional programming and data modeling.

Interests: [big data](#) [distributed systems](#) [functional programming](#) [mechanical sympathy](#)

## Work experience

### Apple Inc

Nov 2020 - Current

#### Senior Software Engineer (ICT 4)

- Developing and optimizing the pricing logic and rules engine that drives Apple Store operations

[scala](#) [java](#) [apache cassandra](#) [oracle db](#) [apache kafka](#) [openapi](#) [rust](#)

### Integral Ad Science

Feb 2015 - Aug 2020

#### Principal software engineer

- **Led cross-team re-platforming efforts** in core architecture and design.
- **Led development and design of near real-time platform** and streaming applications: fraud detection, user exposure tracking & engagement optimization, campaign monitoring

[scala](#) [java](#) [cats](#) [apache spark](#) [apache flink](#) [apache kafka](#) [aerospike](#) [graphite](#) [aws](#)

### Pellucid Analytics

Oct 2014 - Feb 2015

#### Senior scala developer

- Designed and developed backend services for financial analytics tools.
- Optimized data modeling for complex financial reports.

[scala](#) [scalaz](#) [apache cassandra](#) [play! framework](#) [datomic](#)

### Grid Dynamics

Feb 2012 - Oct 2014

#### Senior software engineer

- Led development of [streaming data platform](#) using open source solutions
- Led development and design of [CI/CD platform for release engineering](#)
- Participated in a project of porting **apache storm 0.9.0** from **clojure** to **java**

[scala](#) [akka](#) [apache kafka](#) [apache storm](#) [clojure](#) [apache cassandra](#)

### Informatica

Sep 2011 - Feb 2012

#### Senior software engineer

- Developed and enhanced components of the **Data Master Management Solution**
- **Led code quality initiatives**, implementing best practices for unit testing and CI/CD pipelines

[java](#) [ejb](#) [java ee](#) [jsf](#)

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## Kentor

Nov 2009 – Sep 2011

### Senior software engineer

- Designed and developed an integrated messaging solution for mobile and web, enabling **near real-time communication** between drivers
- Contributed to a web-based **back-office application** for managing customer contracts and registrations for **Yota**

java gwt hibernate spring framework rabbitmq oracle db

## Exigen Services

Feb 2008 - Nov 2009

### Software engineer

- **Developed and maintained an EJB-based platform for multi-channel customer interactions**, supporting web, mobile, and call center services for a major European telecom provider.
- Implemented and optimized back-end services on **BEA WebLogic**, improving system reliability and maintainability
- **Contributed to service-oriented architecture (SOA) development**, enabling interoperability across multiple business systems

java bea weblogic hibernate spring framework service oriented architecture ejb

## Skills

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**Programming Languages:** Scala, Java, Rust, Clojure, Kotlin, JavaScript/TypeScript

**Distributed Systems & Streaming:** Apache Kafka, Apache Flink, Apache Spark, Apache Hadoop, Apache Storm

**Databases & Storage:** vast experience with relational (MySQL, Oracle, PostgreSQL, DB2) and NoSQL (Apache Cassandra, Aerospike, Redis, Elasticsearch, DynamoDB) databases

**Cloud & DevOps:** AWS (EC2, S3, MSK, Lambda, CloudFormation), Kubernetes, Docker, Terraform

**Software Architecture:** Microservices, Event-Driven Systems, Functional Programming, Type-Driven Development

**Performance & Optimization:** JVM Tuning, Multithreading, Memory Management, High-Throughput Systems

**Leadership & Collaboration:** Technical Mentorship, Code Reviews, System Design, Cross-Functional Collaboration

## Education & Certificates

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**Education:** Ufa State Petroleum Technical University (Russia). Specialist of "Computing machinery and automated systems software". Master's Level Equivalent, honor diploma.

**Certifications:** Sun Certified Java Programmer (SCJP), Sun Certified Web Components Developer (SCWCD), Sun Certified Web Services Developer (SCWSD)

## Accomplishments & Hobbies

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Publications: [Writing NES Emulator In Rust](#), [Critical Analysis of "Clean Code" by R.C. Martin](#)

Projects on github: <https://github.com/bugzmanov>

Public speaking: [Using scala in an enterprise environment](#), [Scaladev 2013 \(in Russian\)](#)