

# IVAN ZAITSEV

📍 Redwood City, CA

Software engineer and architect with **13+** years of professional experience. Specializes in **JVM**-based backends for high-loaded distributed systems. Significant experience in **ML** (python, scala), **Big Data** (OLAP, SQL, Map-reduce), **frontend** (JS/TS, Web). Excellent skills in problem-solving, communication, work ethics, successful project delivery. Passionate about learning, algorithms, performance optimization and roguelike video game development.

## 📁 Professional Experience

- 2020  
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2015 ● **Sr. Software Engineer @ RevJet Inc.** 📍 San Carlos, CA
  - **Technologies:** java, scala, kotlin, spark, spark ML, vertx, kubernetes, docker, AWS, mysql, vertica, clickhouse, cassandra, kafka, etc.
  - created **ML product recommendation pipeline** that was crunching terrabytes of raw data and served up to 1k rps with response time SLA < 20ms
  - created **Recommendation Engine**, that managed 100+ user-defined hierarchical models and served up to 1k rps with model response time under 20ms
  - partially designed and worked on **Analytics pipeline**, that provided ETL and OLAP capabilities for billions of events per day, with petabytes of historic data and real-time reporting capabilities
- 2015  
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2012 ● **Sr. Software Engineer @ Lifestreet Media Corp.** 📍 San Francisco, CA
  - **Technologies:** scala, tomcat, vertica, clickhouse, memcached, golang, python, scikit-learn, scipy, numpy, javascript, phaserjs, webgl, AWS, kubernetes, docker, etc.
  - redesigned and implemented **OLAP backend**, with 10x speed for some queries and extendable architecture
  - created a tech stack from scratch and then successfully lead a team of 3+ people building and delivering **Playable ads** (a web-based replicas of mobile games)
  - participated in development and optimization of an **ML-based RTB bidder**, a high-loaded service with billions of requests per day, reduced RAM requirements 4x
- 2012  
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2010 ● **Software Engineer @ Cogniance** 📍 Kiev, Ukraine
  - **Technologies:** java, EJB 3, spring, hibernate, hadoop, ehcache, maven, postgres, h2, voldemort, JMS, quartz, etc.
  - as a part of a medium-sized team (6-10 software engineers) redesigned **ETL pipeline** for Ad Server to handle the increased traffic (up to one billion impressions per day)
  - designed snowflake-like scheme in Postgres, sql-generating backend service, real-time analytics
  - using extensive knowledge of the whole system was able to fix the most tricky bugs, optimize performance of critical parts, and provide L3 support
- **Additional Experience**
  - Full stack web developer, LLC Prodex, 2007-2010
  - **Software / Database engineer**, Computing Center of Donetsk National Technical University, 2005-2007

## 🎓 Education

- 2010 ● **MS in Computer Science**  
Donetsk National Technical University 📍 Donetsk, Ukraine

## 💻 Online Courses

- 2018 ● **Deep Learning Specialization (5 courses) @** deeplearning.ai / Coursera
- 2018 ● **Applied Plotting, Charting & Data Representation in Python @** University of Michigan / Coursera
- 2018 ● **Introduction to Data Science in Python @** University of Michigan / Coursera
- 2014 ● **Machine Learning @** Stanford University / Coursera
- 2012 ● **Principles of Reactive Programming @** École Polytechnique Fédérale de Lausanne / Coursera

## Contact Info

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## Core Competencies

JVM  
Software architecture  
Distributed systems  
High load  
Machine learning  
Big Data & OLAP  
Functional programming  
Concurrency  
Algorithms  
Data structures  
Performance

## Proficiencies

**Languages:** java, scala, kotlin, python, javascript  
**JVM libs:** Vertx, Spring, Hibernate, JPA, JDBC, JMS, Servlets, AspectJ, Spark, Hadoop, Quartz, log4j, slf4j, slf4s, ehcache, Jackson, JMX, concurrency, Akka!, scala parsers/combinators, coroutines, jmh  
**Python libs:** numpy, scipy, pandas, keras, tensorflow, matplotlib, flask  
**Js libs:** react, redux, mobx, d3, phaser, immutable-js, lodash, jquery  
**[NO]SQL:** Vertica, Clickhouse, PostgreSQL, MySQL, H2, SQLite, MS SQL, Cassandra, Voldemort, Memcached, Redis  
**Messages:** Rabbit MQ, kafka  
**Tools:** linters, static analyzers, testing harnesses, profilers, memory analyzers, load testers, CI, containerization, orchestration, etc.  
**Secondary:** Golang, TypeScript, C++, ASM, PHP, Pascal/Delphi, Basic, Matlab