

Roman Shcherbakov

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US citizen

Looking for a challenging and stimulating technical leadership position of high impact to continue professional growth. Established tech lead / software architect with a wide range of expertise across SDLC working on application, test, and infrastructure ecosystems. Servant leader and enabler of team success with ongoing hands-on contribution. Former academic researcher with a Harvard PhD and a life-long passion for learning.

TECHNICAL SKILLS SUMMARY

Multi-cloud certified: [AWS Certified Solutions Architect Professional](#) + [GCP Associate Cloud Engineer](#)

Java skills: Spring Boot, Spring, SOAP and RESTful Web Services, JDBC/Spring, JPA/Hibernate, JMS/Tibco, RabbitMQ, Java 17, Guava, Apache Commons, AssertJ, Lombok

Relational and NoSQL DBs, data stores, and platforms: MariaDB, BigQuery, DynamoDB, Oracle, PostgreSQL, Teradata, Elasticsearch, HBase, Spark, Hive, MongoDB, Redis

Languages: Java, Python, Scala, R, Go

Machine learning: model development, training & scoring, big data, data mining, data-driven decisions

POSITIONS AND PROJECTS

Twitter, remote from NC

Staff Software Engineer, Ads Core Platform

May 2021 – Jan 2023

- ✓ led project to provide infrastructure cost / latency for new ad features in a central dashboard to enable bottom line calculations (for feature top line = \$5–100 mln / yr)
- ✓ implemented a solution to provide fine-grained cross-org billing visibility in Google Cloud with labels
- ✓ proposed and facilitated implementation of multiple projects to save \$15mln/yr of infra cost
- ✓ led Lucene/Elasticsearch proof of concept for new ads candidate selection query engine
- ✓ improved cross-team operations of Ads Serving stack by streamlining alerts and dashboards, fixing long-standing bugs, raising quality and stabilizing data collection for model training pipeline

Bandwidth, Raleigh, NC

Software Architect in Messaging and Emergency Services verticals

Sep 2018 – May 2021

- ✓ devised a detailed program to reach single interface for Emergency Services provisioning (One Bandwidth EVS), moving implementation forward as a team lead
- ✓ working with diverse stakeholders across the company to facilitate the flow of ideas, consolidation of efforts across business domains, and adherence to best architectural practices
- ✓ performed audit, made a proposal, and implemented POCs for scaling Emergency Services platform
- ✓ led design and contributed to development of multiple products deployed to AWS, e.g., event pipeline for deliverability intelligence with Kinesis and Elasticsearch

Teradata, Raleigh, NC

Lead Software Engineer (sustaining) in Marketing Applications division

Jul 2018 – Sep 2018

- ✓ provided technical expertise, guidance, and code review feedback to Raleigh + offshore team
- ✓ ensured overall quality of maintenance releases of Real-Time Interaction Manager (RTIM)

Senior Software Engineer (new development)

Apr 2016 – Jun 2018

- ✓ led design and development of GDPR Traceability compliance and Customer Profile features of RTIM
- ✓ implemented and led integration of R predictive analytics in Customer Interaction Manager

- ✓ designed and developed a stand-alone Groovy application to support customer compliance migrations
- ✓ implemented various security features for applications and APIs: OAuth2, Kerberos, SSO, SAML, XSS
- ✓ performed platform maintenance, migrations to Maven, Java 8, Spring 4

Deutsche Bank, Cary, NC

Software Development Engineer (Java) in Analytic Market Data team

Oct 2014 – Apr 2016

- ✓ improved business logic of interactions with KDB+ database, which eliminated outages of a critical app and stabilized EOD processing in Equities trading
- ✓ adapted applications to new JDBC, JMS, RESTful, and SOAP interfaces, solved multiple audit points and improved system stability
- ✓ built several automated testing workflows to dramatically shorten testing cycles for 2 apps
- ✓ mentored junior team members, coordinated work on projects, maintained documentation

University of Maryland, College Park, MD

Postdoctoral Research Associate (Hubble Fellow) in Astronomy

2011-2014

- ✓ created new fluid dynamics and plasma models to describe behavior of gas near black holes
- ✓ developed scientific codes in Mathematica and C++ for ray tracing, model fitting, and visualizations
- ✓ optimized C++ code for supercomputer architecture and executed workflows on HPC cluster
- ✓ worked with and lead multiple teams, finished 6 projects, wrote papers, presented at conferences

Harvard University, Cambridge, MA

PhD candidate in Astronomy

2006-2011

- ✓ devised massively parallel C++ code ASTRORAY to perform ray tracing new black holes
- ✓ developed fast and precise computation of Bessel functions using integral representations
- ✓ created collaborations and worked with several teams, wrote 7 papers, most as a lead author

PROFESSIONAL SKILLS

Problem solving

- ✓ recognized by 6 grant awards over 10yrs (e.g. NASA Hubble Postdoctoral Fellowship) in Academia
- ✓ pushed frontiers of knowledge in plasma physics and fluid dynamics
- ✓ aced standard tests (e.g. GRE Physics 990/top 5%, GRE General Quantitative 800/top 2%)
- ✓ winner of many school / university Olympiads, former candidate to the International Physics Olympiad

Team work & people management

- ✓ Twitter: led projects; official and unofficial mentor; conducted grooming, planning, and retro meetings
- ✓ Bandwidth: servant leader at leading an Agile delivery team + enabling options as an advisory architect
- ✓ coached new dev team at Teradata to arrive at best dev practices, improve code quality, reduce bug rate
- ✓ co-advised 2 junior team members in Academia, mentored 2 juniors in DB, coached 1 dev in Teradata, team lead at Bandwidth

Certifications / evening & weekend projects

- ✓ Multi-cloud certified: [AWS Certified Solutions Architect Professional](#) + [GCP Associate Cloud Engineer](#)
- ✓ [Professional Scrum Master I](#) (no expiration)
- ✓ 2 USPTO patents, e.g. “[Techniques for Routing Messages in a Communications Network](#)”
- ✓ developed and hosted SmartVideoFilter project for flexible filtered search over 200mln most viewed YouTube videos – MongoDB, Elasticsearch, Spring Boot, Angular 5, multithreading (terminated by YT)
- ✓ wrote [Base CI/CD project with Gradle](#) code and recorded a [tutorial video](#)
- ✓ wrote [Base Java project with Maven](#) code and recorded a [tutorial video](#)
- ✓ 31 Coursera tech courses on Algorithms, Data Mining, Big Data, Deep Learning, Cloud Computing
- ✓ Coursera management specialization “Leading People and Teams” from UMich. Business School