

# Roman Shcherbakov

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US citizen

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Looking for a challenging and stimulating technical leadership position of high impact to continue professional growth. Established 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

**AWS Services:** VPC, IAM, EC2, ECS, Fargate, EKS, Lambda, RDS, QuickSight, S3, EFS, EBS, DynamoDB, ElastiCache, Amazon MQ, SQS, SWF, CloudFormation, CloudWatch, EventBridge, Kinesis, Elasticsearch, managed Kafka, CodeBuild, CodePipeline, ECR

**Java skills:** Spring Boot, Spring, SOAP and RESTful Web Services, JDBC/Spring, JPA/Hibernate, JMS/Tibco, RabbitMQ, Java 11, Guava, Apache Commons

**Relational and NoSQL databases:** MariaDB, Oracle, PostgreSQL, Sybase, Teradata, Elasticsearch, HBase, Spark, Hive, MongoDB, Redis

**Languages:** Java, Scala, Groovy, R, Python, TypeScript, Mathematica

**Tools and platforms:** Docker, Kubernetes, Jenkins, git, Maven, Gradle, Ant, JIRA, Confluence, GitHub

**Data science:** model development & fitting, big data, data mining, machine learning

## POSITIONS AND PROJECTS

### Bandwidth, Raleigh, NC

**Software Architect** in Messaging and Emergency Services verticals Sep 2018 – present

- ✓ 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 proposals, 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

### Certifications / evening & weekend projects

2014-present

- ✓ AWS [Certified Solutions Architect – Professional](#) (till Mar 2023)
- ✓ developed and hosted <https://smartvideofilter.com> for smart filtered search over 200mln most viewed YouTube videos – MongoDB, Elasticsearch, Spring Boot, Angular 5, multithreading (terminated by YT)
- ✓ wrote [Base CICD project with Gradle](#) code (tutorial video pending)
- ✓ 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
- ✓ [Java EE 6 Web Services Developer Certified Expert](#) (no expiration)

### 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 development of GDPR Traceability compliance and Customer Profile features for RTIM
  - ✓ contributed in engineering 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, wrote documentation, and released publicly
  - ✓ developed fast and precise computation of Bessel functions using integral representations
  - ✓ started collaborations and worked with several teams, wrote 7 papers, mostly as a lead author

## **PROFESSIONAL SKILLS**

### **Problem solving**

- ✓ able to disentangle and translate into code the most complex business requirements; propose maintainable, simple, and scalable solutions
- ✓ 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

### **Project and time management**

- ✓ full project management and project tracking at Bandwidth as a team lead of an Agile team
- ✓ produced MVPs, worked to split into milestones, stories and arrive at T-shirt + bottom-up time estimates
- ✓ helped distribute work among team members to target either cross-training or fastest delivery goals
- ✓ managing personal projects on Kanban board on self-hosted JIRA instance

### **Team work & people management**

- ✓ servant leader at Bandwidth 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
- ✓ worked in a distributed team with business, QA, and support to deliver under strict deadlines at DB
- ✓ co-advised 2 junior team members in Academia, mentored 2 juniors in DB, coached 1 dev in Teradata, team lead at Bandwidth