Roman Shcherbakov

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US citizen

Looking for a challenging and stimulating lead/principal software engineer position to continue professional growth. Established back-end developer of real-time and offline analytic/data management applications with a passion for leading by example. Former academic researcher with a Harvard PhD. Have strong background in Java, object-oriented design, large-scale real-time systems, big data and machine learning.

TECHNICAL SKILLS SUMMARY

Java skills: Spring, SOAP and RESTful Web Services, JDBC/Spring, JPA/Hibernate, JMS/Tibco, Spring Boot, Guava, Apache big data stack, Google Guice, jUnit, Mockito

Big Data tools: HBase, Spark, Hive, Apache Hadoop, KNime, MongoDB, Redis, ElasticSearch, Cloudera + HortonWorks solutions

Relational Databases: Oracle, PostgreSQL, Sybase, Teradata, MySQL

Languages: Java, Scala, Groovy, R, Python, C++, TypeScript, Mathematica

Platforms: Windows, Linux/UNIX, AWS, Android, Cygwin, deployments in virtual machines

Tools: GIT, SVN, Maven, Gradle, Ant, JIRA, Confluence, Bamboo, Crucible, VMWare, VirtualBox

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

POSITIONS AND PROJECTS

Teradata, Raleigh, NC

Lead Software Engineer (sustaining) in Marketing Applications division   Jul 2018 – present
- ✓ 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
- ✓ maintained several applications, devised and implemented solutions for many bugs and data problems, introduced features
- ✓ 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

Evening/weekend studies and projects   2014-present
- ✓ developed and hosted https://smartvideofilter.com for smart filtered search over 200mln most viewed YouTube videos – MongoDB, Elasticsearch, Spring Boot, Angular 5, multithreading
- ✓ technology blog https://astroman.org/blog + website self-hosted on AWS

- ✓ 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
- ✓ project management on a self-hosted JIRA instance
- ✓ Java EE 6 Web Services Developer Certified Expert (passed certification)

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 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
- ✓ analyzed astronomical data, executed and tweaked pipelines
- ✓ 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

Exceptional problem solving skills
- ✓ able to understand and translate into code the most complex business requirements; propose maintainable, most original and efficient 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 skills
- ✓ met deadlines for all functionality in DB and Teradata
- ✓ was able to efficiently split projects into stories and tasks to provide precise time estimates
- ✓ worked with PM/architecture in Teradata to define tasks and iterate in Agile environment
- ✓ helped distribute work among team members to target either cross-training or fastest delivery goals
- ✓ managing personal project on Kanban board on self-hosted JIRA instance

Excellent ability to lead and work in a team
- ✓ coached a new dev in Teradata to instate best dev practices, improve code quality, reduce reopen rate
- ✓ worked in a distributed team with business, QA, and support to deliver under strict deadlines in DB
- ✓ finished 5 projects independently and 14 projects as a part of various teams in Academia
- ✓ co-advised 2 junior team members in Academia, mentored 2 juniors in DB, coached 1 dev in Teradata

Communication skills, teaching, coaching
- ✓ oral presentations – multiple presentations to stakeholders and knowledge transfer sessions in Teradata, 3 university colloquium talks, 3 invited conference talks in Academia
- ✓ wrote application documentation, wrote 15 papers in top refereed journals
- ✓ teaching fellow for Harvard core undergrad, advanced undergrad, and grad courses
- ✓ coached National Russian teams for International Physics Olympiad, successfully implemented innovative teaching method

PERSONAL ACHIEVEMENTS

- ✓ **Machine learning** – ranked 4 out of 186 in ML competition for Data Mining Capstone project on Coursera
- ✓ **Financial simulations** – wrote successful code to become Round 1 Winner of 2010 degreeTrade competition by DC Energy