Foat **Akhmadeev**

SENIOR SOFTWARE ENGINEER

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Summary

Software engineer with 9+ years of professional experience. Most recent experience includes Java (10+ years), Scala (7+ years) and Kotlin (1+ years) development. Previous experience includes 3+ years of C++ development and 2+ years of project management. Notable accomplishments:

- Designed and developed complex services for various Java projects. Always delivered fully documented clean and clear code.
- Designed and developed several search systems using Apache Solr and Elasticsearch.
- Wrote a data mining system for own financial project.
- Successfully managed a small team on a Java project.
- Created three novel algorithms in the fields of computer vision and image processing.
- Wrote several publications in the field of computer vision.

Specialties: Java, Kotlin, Scala, C++ development.

Experience

Lyra Solar
Remote

SENIOR SOFTWARE ENGINEER
Jul. 2019 — PRESENT

- Built elasticsearch system for searching equipments for solar design.
- Designed and developed an algorithm for maximizing the roof area available for solar panels.
- Various contributions to help building permit packages.

Related skills: Java, Unit testing, Mocking, Spring Boot, Git, MySql, Elasticsearch, OpenAPI, Postman ITs.

foat.me
Worldwide

SENIOR SOFTWARE ENGINEER
Feb. 2015 — PRESENT

Working on several own projects:
- Currently working on an investment portfolio management tool with backtesting features.
- Wrote some software developments articles on a personal website: foat.me. It mostly includes Scala articles.
- Designed and wrote a complex data mining system for a financial project.

Related skills: Scala, Java, R, Python, Kotlin, DevOps, Unit testing, JavaScript, C++, Spring Framework, Play framework, Build automation tools, Git, Apache Solr, Sql.

Kapital Trading
Remote

SENIOR SOFTWARE ENGINEER
Aug. 2015 — Jun. 2019

- Contributed to a complex multi-threaded trading system.
- Contributed to an open-source crypto currency library xchange-stream

Related skills: Java, DevOps, Unit testing, Mocking, TDD, BDD, Build automation tools, MySql.

Self-employed
Remote

SENIOR SOFTWARE ENGINEER
Feb. 2015 — Aug. 2015

Worked on several projects, listed some notable ones:
- Wrote a book in the fields of computer vision and web development: [1].
- Designed and implemented robust and fast algorithm for multiply chalkboard detection. It works in real-time and processes more than 40 HD images per second on a regular computer. The pixel precision is higher than 90%.
- Created a Java throttling framework from scratch using Spring MVC and AspectJ.

Related skills: Java, DevOps, Unit testing, Mocking, Aspects, TDD, BDD, JavaScript, C++, Spring Framework, OpenCV, Build automation tools, Git, Computer vision, Image processing.

Center for Machine Perception

COMPUTER VISION RESEARCHER

Prague, Czech Republic
Nov. 2014 — Jan. 2015

Worked as a researcher and developer on a project in the field of *Image rectification using vanishing lines and local affine frames*. Notable achievements:
- Designed and developed a line-annotation tool on Matlab.
- Created a test system for vanishing points and lines detection algorithms using C++ and Matlab.
- Improved existing vanishing points detection algorithm.

Related skills: C++, Matlab, Unix, Git, Computer vision, Image processing.

RoadAR

COMPUTER VISION DEVELOPER

Kazan, Russia
Jul. 2013 — Sep. 2014

Worked on a RoadAR project. The application warns drivers about traffic-signs and other necessary information. Notable achievements:
- Created a novel algorithm for traffic-sign detection and recognition, which works in real-time on mobile phones. The algorithm showed a superior performance compared to many state-of-the-art approaches. The algorithm is implemented on C++.
- Designed a test system using Java for the traffic-sign detection algorithm.

Related skills: C++, Java, OpenCV, Unit testing, PostgreSQL, Swing, Maven, Android NDK, Boost library, CMake, Git, Computer vision, Image processing, Machine learning.

Digital Zone

SENIOR SOFTWARE ENGINEER

Kazan, Russia
Apr. 2013 — Jul. 2013

- Managed a small team on a mobile version of m.ulmart.ru website.
- Conducted technical interviews.

Related skills: Java, MySQL, Spring MVC, Apache Solr, JavaScript, Application servers, Freemarker, Git, Maven.

Digital Zone

SOFTWARE DEVELOPER

Kazan, Russia
Sep. 2011 — Apr. 2013

Developed complex services for several high-loaded websites. Mostly worked on ulmart.ru project. Notable achievements related to this website:
- Built a search platform based on Apache Solr.
- Created an asynchronous catalog of goods using JavaScript and Spring MVC.
- Designed and implemented a new database. This helped to remove several bottlenecks and improve the website performance.

Related skills: Java, GWT, DevOps, Spring MVC, MySQL, EJB, Apache Solr, JavaScript, Application servers, Freemarker, Version control, Build automation tools.

Education

Kazan Federal University

MSc IN COMPUTER SCIENCE

ADVISOR: EVGENY STOLOV

Kazan, Russia
2012 — 2014

Fields of interest: computer vision and image processing. Master thesis:
- 3D scene reconstruction from a single view. Resulted in a paper called *Surface Prediction for a Single Image of Urban Scenes*. It was presented in Singapore in 2014 on the SUAS 2014 workshop. The article itself was published in 2015: [2].

Related skills: Matlab, C++, TEX, Computer vision, Image processing.

Kazan Federal University

BSc IN COMPUTER SCIENCE

ADVISORS: EVGENY STOLOV; ALEKSANDR SHLYANNIKOV

Kazan, Russia
2008 — 2012

Fields of interest: computer vision and image processing, machine learning, web development. Projects:
- Handwritten digit recognition using Java.
- E-library using GWT.

Related skills: Java, JEE, GWT, Computer vision, Image processing, Machine learning.

It& programming skills

Main languages	Java, Kotlin, Scala, C++
Data analysis	Matlab, R, Python
Scripting languages	Shell script, JavaScript
Markup languages	XML, JSON, HTML, CSS
Query languages	SQL
Application and web servers	JBoss, Tomcat, Jetty
Revision control	Git, Subversion
Build tools	Maven, Gradle, CMake, SBT
Systems on administration level	macOS, Linux
Other	Spring Framework, Play framework, OpenCV, Swing, Android NDK, MySQL, PostgreSQL, TDD, BDD
Digital typesetting	TEX, LATEX

Languages

Russian	native speaker
English	professional proficiency

Publications

[1] F. Akhmadeev, *Computer Vision for the Web.* Packt Publishing, 2015. [Online]. Available: https://www.packtpub.com/web-development/computer-vision-web

[2] ——, "Surface prediction for a single image of urban scenes," in *Computer Vision - ACCV 2014 Workshops*, ser. Lecture Notes in Computer Science, C. Jawahar and S. Shan, Eds. Springer International Publishing, 2015, vol. 9008, pp. 369–382. [Online]. Available: http://dx.doi.org/10.1007/978-3-319-16628-5_27