

Foat Akhmadeev

SOFTWARE ENGINEER · RESEARCHER

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Summary

Software engineer with 4+ years of professional experience. Most recent experience includes Java (5+ years) and Scala (2+ years) development. Previous experience includes 2+ years of C++ development and 1+ year of project management. Notable accomplishments:

- Designed and developed complex services for various Java projects. Always delivered fully documented clean and clear code.
- 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, Scala, C++ development.

Experience

Self-employed

Worldwide

SENIOR SOFTWARE ENGINEER

Feb. 2015 — PRESENT

Currently working remotely on a Java trading platform in a small firm. Other notable projects:

- Writing software developments articles on a personal website: foat.me. It mostly includes Scala articles.
- 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: Scala, Java, DevOps, Unit testing, Mocking, Aspects, TDD, BDD, JavaScript, C++, Spring Framework, Play framework, OpenCV, Build automation tools, Git, Computer vision, Image processing.

Center for Machine Perception

Prague, Czech Republic

COMPUTER VISION RESEARCHER

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

Kazan, Russia

COMPUTER VISION DEVELOPER

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

Kazan, Russia

SENIOR SOFTWARE ENGINEER

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

Kazan, Russia

SOFTWARE DEVELOPER

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

Kazan, Russia

MSc IN COMPUTER SCIENCE

2012 – 2014

ADVISOR: EVGENY STOLOV

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

Kazan, Russia

BSc IN COMPUTER SCIENCE

2008 – 2012

ADVISORS: EVGENY STOLOV; ALEKSANDR SHLYANNIKOV

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

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| Main languages | Java, Scala, C++ |
| Data analysis | Matlab |
| 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 | OS X, 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