

# Pavel Fatin



## Goal

Scala/Java developer, team lead, system architect, consultant

## About me

- Fond of technology and programming from an early childhood.
- Can build a computing system from the level of logic gates.
- 12 years experience working with Java technology.
- Personal software projects (Aether, [SleepArchiver](#), [ToyIDE](#), etc.).
- Interested in computer science, HCI, personal development, writing.
- Love complex tasks, elegant code, unit testing, open source.
- Journal articles, blog ([pavelfatin.com](#)).
- Eager to progress.

## Qualifications

**Methodologies** OOAD, agile software development, extreme programming, user-centered design

**Techniques** requirements analysis, continuous integration, refactoring, unit testing, acceptance testing, TDD, network programming, database programming, ORM, reverse engineering, HCI design

**Paradigms** OOP, functional programming, AOP, concurrent programming, dynamic languages, design patterns, DSLs

**Languages** Scala, Java, Groovy, C/C++, Ruby, PHP, JavaScript, Clojure, Haskell

**Technologies** Java SE, Java EE (Servlet, EJB, JSP, JPA, JTA, JMS), SQL, JDBC, Hibernate, LAMP (XHTML, CSS, AJAX), XML (SAX, DOM, Schema, XPath, XSLT, binding), Rails, Grails, UML, Regex, SwingX, Velocity, JUnit

**Tools** version control systems, issue tracking systems, continuous integration software, debuggers, profilers, build tools, code coverage tools

## Education

### Siberian State Industrial University (Novokuznetsk, Russia)

Mathematical Modelling and Numerical Methods (2004 - 2007) \*postgraduate course

Finances and Credit (1999 - 2004) \*diploma with distinction

### Gymnasium No. 44 (Novokuznetsk, Russia)

(1997 - 1999) \*gold medal

### School No. 1 (Stepnoy settlement, Russia)

(1991 - 1997)

## Experience

### JetBrains (St. Petersburg, Russia)

#### Scala plugin for IntelliJ IDEA (2009 - now)

Plugin for [Scala](#) language support in [IntelliJ IDEA](#) IDE.

- Implemented many unique new features.
- Redesigned the plugin user interface.
- Introduced idiomatic Scala wrappers for IDEA API.
- Enhanced and optimized unit tests.
- Add various improvements to the infrastructure.
- Wrote articles for the plugin blog.
- Presented the project at conferences ([Scalathon](#), [ScalaSPB](#)).
- Communicated with users and contributors.

Scala, Java SE, Swing, IntelliJ IDEA, JUnit, Lift, Ant, Maven

#### Exception Analyzer (2009 - now)

Multi-tier system for reporting, analyzing, clustering and managing error reports for all IDEA-family products. Provides access via IDE plugin, web browser or SOAP protocol. The system interacts with many external services ([TeamCity](#), LDAP, etc).

- Redesigned the system to increase performance and scalability.
- Created an improved user interface.
- Introduced unit testing and issue tracking.
- Extended, refactored and supported the system.

Scala, Java SE, Ruby, SQL, XML, HTTP, SOAP, Regex, Hibernate, JDBC, Swing, JUnit, Ant, Rails, HTML, CSS, Tomcat, MySQL, FreeMarker, Axis, Linux

### Municipal City Hospital No. 1 (Novokuznetsk, Russia)

#### Hospital Information System (2005 - 2009)

Software for managing administrative and clinical aspects of a hospital. Build on dedicated framework with custom GUI controls, ORM persistence and a report engine.

- Organized the development process.
- Designed a system architecture.
- Created several client and server components.
- Built tools for processing statistical data.
- Provided acceptance tests and documentation.
- Advised on software technologies.
- Tutored newcomers in programming practices.

Java EE / SE, Swing, Scala, Groovy, Regex, XML, SQL, JDBC, Hibernate, JUnit, jMock, JasperReports, JBoss, Tomcat, PostgreSQL, Ant

## Galleon LLC (Novokuznetsk, Russia)

### **Aether SCADA (2008 - 2009)** \*contract

Java-based SCADA software for ventilating equipment. Provides device mimics, event logs, alarms, schedules, data history and complex graphs. Has a built-in support for Modbus protocol. Integrates both with own PLCs and third-party equipment ([Swegon](#) GOLDs). Used in 7 business centres (up to 140 devices per building).

- Proposed the idea and a draft.
- Performed requirements analysis.
- Developed user interface.
- Designed application architecture.
- Done programming and testing.
- Provided documentation, trainings and support.

Java SE, Swing(X), XML, JDBC, JavaDB, JUnit, JFreeChart, ProGuard, Ant, Modbus

### **SCADA programming (2007 - 2008)** \*contract

[Master SCADA](#) project with custom FBD blocks and GUI controls for remote dispatching of ventilating equipment. Software manages 4-level building with more than 120 PLC devices of 7 types, provides detailed floor plans, device mimics, logs, graphs and schedules.

- Built custom FBD and GUI controls.
- Developed UI, including floor plans and device mimics.
- Created SCADA project.
- Designed RS485 network structure and wiring.
- Defined PLCs communication protocols.
- Done project commissioning.
- Provided documentation, trainings and consulting.

SCADA, FBD, .Net, C#, ActiveX, OPC, Modbus

### **PLC programming (2006 - 2008)** \*contract

Hardware and software for ventilating equipment (air handling units, chillers, curtains, fans, dumpers, etc.) with [Segnetics](#) SMH and Pixel PLCs. Mission-critical regulators with menus, logs, schedule, networked sensors/actuators and remote dispatching. Used in 5 business centres.

- Negotiated with customers, manufacturers and suppliers.
- Performed requirements analysis.
- Outlined a blueprint and schedules.
- Designed electrical schemes.
- Developed software for PLCs.
- Managed the assembling.
- Done acceptance testing.
- Provided documentation, trainings and consulting.

PLC, FBD, Modbus, Ruby

## **1C programming (2004 - 2005)**

Custom platform configuration for management accounts. Built from scratch. Includes projects management, inventory accounting, financial accounting and consolidated reports.

- Communicated with company employees and owners.
- Performed requirements analysis.
- Proposed the idea and a draft.
- Designed a domain model, GUI and reports.
- Done programming and testing.
- Provided documentation, trainings and consulting.

1C, UML

## **Novosoft (Novosibirsk, Russia)**

### **Mobile Web Accelerator (2002 - 2003) \*contract**

Client-server traffic compression system for mobile devices with custom compression algorithm.

- Communicated with customers.
- Developed the server part.
- Implemented compression algorithm in Java and C++.
- Participated in testing and commissioning.

Java SE, AWT, C++, MFC, HTTP(S), TCP/IP

### **Lightweight JMS (2000 - 2002) \*contract**

Fast **JMS** implementation with native database.

- Communicated with specifier.
- Developed the server part.
- Documented the code.
- Designed tests.
- Participated in commissioning.

JavaSE, JMS, JNI, C/C++

## Personal projects

### ToyIDE (2011 - 2011)

An imitation of a full-featured IDE plus a toy language with an interpreter and a compiler. All the parts were built from scratch in Scala, without relying on any existing code or libraries. The project is purely educational. It is a product of a long vacation in the country and a desire to learn how all this stuff really works. Links: [project page](#), [code](#).

- Developed an IDE with pluggable language architecture.
- Designed a simple imperative, statically typed language.
- Created a lexer, a parser and a type system.
- Implemented highlighting, completion, refactoring, formatting, etc..
- Implemented a set of inspections, including control flow analysis.
- Built an interpreter for the custom language.
- Built a compiler for the custom language.
- Created a static code optimizer.
- Wrote 577 unit tests (running time is less than 3 seconds).

Scala, Swing, Java bytecode, JUnit, Maven

### SleepArchiver (2008 - 2009)

Cross-platform data manager for [Sleeptracker](#)-series watches, provides advanced GUI with hot-keys, internationalization and undo/redo actions. Supports communication with the devices, CSV import/export, portable mode. Uses compressed XML with an open [definition](#) for storing the data. Windows version comes with an installer. Links: [project page](#), [code](#).

- Analyzed the requirements.
- Designed GUI and graphs.
- Implemented device protocol.
- Done programming and testing.
- Created a web page for the software.
- Built a Windows installer.

Java SE, Swing, SAF, Java Communications API, XML, JUnit, Ant, NSIS, Linux

### Ratings (2007 - 2008)

Modular system for forecasting human ratings for films, music, books, etc. Data sets contain [person, object, grade] records taken from web sites. Software uses statistical algorithms to generate predictions. Attained accuracy is greater than accuracy of original site predictions.

- Developed a web crawler.
- Performed statistical analysis of data.
- Created forecasting algorithms.
- Done programming and testing.
- Optimized code performance using profiler.

Java SE, Apache Commons-Math, JUnit

## Links

**My site** [pavelfatin.com](http://pavelfatin.com)

**GitHub** [github.com/pavelfatin](https://github.com/pavelfatin)

**SourceForge** [sourceforge.net/users/pavelfatin](https://sourceforge.net/users/pavelfatin)

**StackOverflow** [stackoverflow.com/users/599147/pavel-fatin](https://stackoverflow.com/users/599147/pavel-fatin)

**Twitter** [twitter.com/pavelfatin](https://twitter.com/pavelfatin)

## Contacts

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