



Sergey Zhukov

FULL-STACK JAVA DEVELOPER · SENIOR DESKTOP DEVELOPER

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Education

ITMO State University

B.S. IN INFORMATION SYSTEMS AND TECHNOLOGIES

Saint Petersburg, Russia

2007 - 2012

Skills

| | |
|------------------------------|--|
| Programming languages | Java, Javascript, Delphi, C++ |
| Web | HTML5, ECMAScript6, LESS, Bootstrap |
| Databases | MySQL, MSSQL, SQLite, MongoDB |
| Tools and Services | Git, SVN, Bash, PowerShell, Continuous Integration (Travis, GitLab CI) |

Experience

iTVA

SENIOR DESKTOP DEVELOPER

Saint Petersburg, Russia

2010 - 2017

- Lead developer on a number of projects:
 - Native Windows applications
 - Cross-platform applications for Windows and MacOS
 - Web services
 - Libraries for internal usage within a team (internationalization library, persistent settings library)
- Was responsible for development and release of more than 10 software products
- Used technologies:
 - Programming languages: Delphi, C++, Javascript
 - UI frameworks: VCL, Firemonkey, Skinbuilder, Sciter, CEF
 - Libraries and databases: libtorrent, bass, MySQL, FireDAC, SQLite

Upwork

FREELANCER

Remote

2016 - present

- Profile - <https://www.upwork.com/freelancers/01fe466a51a96a2b6a>
- Average project rating - 5.00/5.00
- 20 jobs in different areas:
 - Java
 - Javascript/jQuery
 - Windows and MacOS installers
 - Various desktop projects: launcher and installer for MMO game, custom Chromium build, visual components for Delphi VCL

VBrand

FULL-STACK JAVA DEVELOPER

Remote

Mar. 2017 - present

- Implemented a screen capturing system (PowerShell, FFmpeg)
- Implemented a client-server application for video processing (cutting/merging/converting). RESTful API; Backend - Java, FFmpeg; Frontend - Javascript, Bootstrap, jQuery

Self-motivated projects

Maze generator

[GitHub project](#)

JAVA, GRAPH THEORY, SERVLET API

2015 - 2016

- Web application - <http://zhukovsd.github.io/maze-generator/>
- Algorithm works with planar graphs, which allows building mazes of arbitrary shape
- Finished generator was used during the implementation of maze solving Android game

Multiplayer minesweeper on infinite grid

[GitHub project](#)

JAVA, MONGODB, CONCURRENCY, WEB SOCKETS, HTML5

2016

- Web application - <http://5.101.123.222:8080/online-minesweeper/>
- Backend - JavaEE application, Frontend - HTML5/JS/Canvas, communication protocols - HTTP, WebSocket
- The grid is conventionally infinite and lazy-generated. A single unit is a chunk - an area of NxM cells
- A chunk is a unit of every internal interaction within the application:
 - Cells fetching from DB happens by indexed chunkID field
 - Fine-grained locking mechanism locks the field by chunks
 - Field area requesting by clients

Notable work projects

[Loviotvet.ru](#)

DELPHI

2010 - 2012

- Smart calculator for solving and simplifying math expressions and equations
- Self-implemented solving engine based on [reverse polish notation](#) builds a simplifications tree which allows displaying a solution in step-by-step fashion
- Supported math operations:
 - Common and decimal fraction operations
 - Polynomial operations including division
 - Solving linear and square equations
- A web service based on solving engine exposes RESTful API and serves requests from mobile clients and web application
- Freeware desktop, mobile and web clients were released for CIS market. Mobile clients have 500k+ installs, the service app served more than 12 millions of requests

An application for processing video content

JAVA, JAVASCRIPT, BOOTSTRAP

2017

- A client-server application for processing (cutting/merging/converting) video content. Typical usage is to create highlights clip from a show or to cut out ads from a broadcast record
- Architecture:
 - Backend - Java, FFmpeg
 - Frontend - Javascript, Bootstrap, jQuery
- Backend service exposes RESTful API which serves requests from web app UI views
- Supported video sources:
 - Direct URL
 - Torrent file
 - Youtube video URL

Plugin player

DELPHI, C++

2015

- Plugin which allows watching videos through p2p (torrent) protocol directly in browser
- The application consists of a "host" application which loads torrents and communicates with browsers. There are a number of standards for plugin implementation, so the application implements most popular ones:
 - PepperAPI (Chrome, WebKit-based browsers)
 - NPAPI (Firefox, pre-WebKit Opera)
 - ActiveX (Internet Explorer)
- "Host" application loads torrents using Delphi wrapper for libtorrent C++ library
- "Host" application communicates with plugins using Windows Messages
- UI for plugins is implemented with a Skinbuilder UI framework which is built on top of WinAPI