

Alexander Turbov

Contact

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Education

1997 – 2001 Saint Petersburg Electrotechnical University "LETI" (ETU). Department of Computing Technologies and Informatics. Master of Science in "Computers, Computer Complexes, Systems and Networks".
1995 – 1996 Vladivostok University of Economics and Service, Department of Computer Science.
1992 – 1993 Vladivostok State University, Department of Chemistry.

Last Employment

2009/08 – present Contractor Software Engineer / IT Consultant
2009/05 – 2010/02 Sr. Software Research Engineer at DrWeb, Inc
2007/10 – 2009/04 Sr. Software Engineer at Unison Technologies, LLC
2005/09 – 2007/10 Sr. Software Engineer at StarSoft Development Labs

Selected Projects

- **Kate C++ Helper Plugin**, 2011 – present
This is my open source project intended to simplify the life of C++ programmers who use [Kate editor](#) to write C++ code. The [plugin](#) add a C++ code autocompleter (clang based) and various enhancements designed for daily C++ coders work.
- **Project ESSE**, 2010 – 2012
Startup project targeted to small and medium size business. Implemented several applications consisting of daemons interacting over network. Applications implemented in C++11, including one hybrid utilizing Apache Tika library (in Java) via JNI. Also I'm the inventor of couple innovative libraries used internally.
- **Combat Management System**, 2009 – 2010
This is a military hard realtime software targeted for LynxOs on PowerPC. I've implemented a core of the system: communication facilities, interaction with OS and between modules, message passing, handling and validation subsystem.
- **DrWeb Enterprise Suite**, 2009 – 2010
An anti virus solution targeted to enterprise sector. [ES](#) is a multiplatform (about 70) client-server software. Being in a server side group I was the inventor of a modified algorithm to distribute updates. Also I initiated a lot of refactoring in order to clean up the code and use modern C++ idioms and design patterns.
- **HBX Analytics (backend services)**, 2005 – 2007
One of the most important product of [WebSideStory](#), Inc. Worked on implementation

of new features for several releases of HBX: make whole system Unicode aware, multi-threaded pluggable HTTP requests handler, autotoolize C/C++ modules, lot of other cool stuff. The software was designed to process huge amount of data. Used tools and libs: C++ (gcc), boost, libMAGE, **FUSE**.

Research Interests

Parallel and distributed computation. High-performance computing. Adaptation in cluster and grid systems. Autonomic computing. Artificial intelligence and expert systems. CASE (Computer Aided Software Engineering). Programming methodologies.

Expertise

- experience of design and development scalable/cluster 24×7 applications with requirements of performance and reliability, including real time systems (LynxOS). Broad experience in object oriented design and usage of design patterns, TDD, template meta-programming.
- experience with bugs and memory-leak hunting, performance tuning, optimizing memory and/or speed, pair programming, organizing code style policy and code review procedure.
- strong knowledge of the following programming languages: C/C++ (over 15 years) and standard libraries, assembler for x86, Python, UNIX scripting tools.
- also, familiar with Ruby, Java/JNI, Erlang, good knowledge of PHP 4.x/5.x + Smarty, SQL, SWIG, JavaScript (NodeJS, React, Redux, ...), (X)HTML+CSS, XML+XSLT, lex/yacc/bison/ANTLR.
- broad experience of working with POSIX API (threads, sockets, message queues, signals, ...), boost (mpl, iterators, signals, serialization, spirit, threads, ...), Qt/KDE, APR + Apache httpd API, libxml2/expat, OpenLDAP and also a lot of other less-known libraries/protocols.
- hardcore experience as a project maintainer: Git, GNU Make, automake, autoconf, libtool, gettext, autogen, CMake, continues integration, Docker, Vagrant.
- proficient in package making for Gentoo/Exherbo, Debian/Ubuntu, RHEL/CentOS, automation of daily tasks w/ bash, Python, Ansible.

Other

- in school years: prize places in city olympics in chemistry, second place in region olympics
- hobbies: **coding** (also, contributing to various open source projects), freediving, snowboarding, volleyball, bike, bowling, traveling and tourism
- native language Russian, fluent English