Alexey Omelchenko

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SENIOR SOFTWARE DEVELOPER

OBJECTIVE
A challenging position that can utilize and further sharpen my expertise in development of high-performance enterprise-level software

SUMMARY
- Over 11 years of software development experience
- Expertise in application performance analysis and optimization
- Strong experience in design and development of client-server enterprise systems
- Excellent C++ with emphasis of object oriented programming
- Proficiency in industry standard C++ libraries and technologies
- Strong skills in cross-platform development and porting
- Comprehensive knowledge of data modeling on physical and logical levels
- Over 6 years of software systems development for major financial institutions in USA and Europe
- Understanding of banking, investment, and financial services industry needs and transactions
- Excellent problem solving skills
- Excellent communication and interpersonal skills, leadership and teamwork
- Need a sponsor for a new H1B visa

SKILLS
Programming languages: C++ (including C++11), C#, .Net, C, Java, Objective-C, SQL, Python, Perl, Assembler
Libraries & technologies: STL, Boost, Win32 API, MFC, ATL, WTL, COM, Posix, Intel TBB, FIX, Tibco RV, ZeroC ICE, ZeroC IceFIX, P/Invoke, JNI
Architecture & design: UML, Design Patterns
Web technologies: HTML, XML, XSLT, PHP, LAMP
RDBMS: Oracle Database, MS SQL Server, MySQL, Sybase ASE
Software platforms: Linux, Solaris, Windows 2008/2003/2000, Windows 7/Vista/XP
Development tools: CVS, SVN (Subversion), Clearcase, Source Safe, Enterprise Architect
Performance tools: Intel C++ Compiler, Intel Performance Libraries, Intel VTune
Hardware platforms: x86, Itanium, x86-64 (AMD64), XScale
Virtualization: VMware, Xen
Development process: Agile, Iterative methodologies, Scrum, TDD, FDD, PSP, TSP, XP

EXPERIENCE
2010 – Present, Lead of Development Team, Otkritie (www.open.ru/en/), Moscow, Russia
Systems: Internet Banking, SugarCRM, OTRS, CreditRegistry, Accounting System, SMS Information Service
A set of systems designed for needs of Bank's corporate clients and VIP oriented business. Different systems are integrated. Some services are written from zero, another modified and adapted from open source projects.
- Headed development and integration of in-house information systems and open source solutions
- Designed and implemented a framework for internal system services development, it includes service management, logging, unified configuration management, communication layer

- Developed SMS Information Service – C# Windows Service, robust, fault tolerant, that notifies recipients about events in various information systems through SMS
- Participated in integration of an external Internet Banking System and our internal Accounting System – determined format and data structure of documents, UML
- Developed an integration service for transformation of file-based requests on Windows server into remote shell scripts calls on Unix-based server, transformation of asynchronous requests to synchronous processing was implemented, C++ multithreaded client-server
- Developed robust file delivery service in Python – to ensure that file from a local folder will be delivered to a remote location even in case of temporary network problems – the service is important for systems integration implemented through file exchange
- Participated in customization of SugarCRM to internal needs – set of integrations and custom improvements for the systems: Internet Banking, Accounting System, Analytic System and United Data Storage
- Implemented real time performance monitoring for business critical systems using testing framework and monitoring system, Nagios
- Obtained solid knowledge of corporate banking services

Environment: C++, C#, Python, Perl, PHP, STL, Boost, Oracle, MS SQL Server, MySQL, SVN, ZeroC ICE, NUnit, CppUnit, UML, Redmine, Windows, Linux

2009 – 2010, Senior Software Developer (AVP), Deutsche Bank (db.com), Moscow, Russia

Systems: ARIS, Score

Two automated risk management systems that valuate more than 1M trades daily. They are written in C#, use external risk engine written in C++, running on DataSynapse grid. DBMS – Oracle. For some types of reports FireBird is used.

They are deployed to 2 Citrix boxes, 10 application servers and pool of 3k DataSynapse engines.

- Supervised system development as technical owner
- Delivered 4 major releases of the systems without issues
- Implemented a number of new reports
- Implemented permissions system for books of trades and reports
- Developed automated regression testing of critical reports in collaboration with testing team
- Coordinated work of development team in Moscow and business in London, Singapore and South America
- Obtained knowledge of valuation of asset derivatives - FX, Money Market, FI, IR Swaps

Environment: C#, C++, STL, Boost, Python, Oracle, DataSynapse, SVN, UML, Jira, Confluence, Windows

2007 – 2009, Senior Software Developer, UBS (ubs.com), Moscow, Russia

System: Termi

Solution designed for securities trading, pricing, order management, trade audit and much more. It is used for trading of different derivatives. Termi is composed of a large number of processes; a huge number of batch jobs, scripts and cron jobs; and at least 3 databases.

- Transferred ownership of the system from another external team in 1.5 months
- Organized team knowledge transfer
- Supported the system until its total decommission
- Assisted in step-by-step migration of dataflow into another new systems
- Maintained legacy code in C, C++, Objective C, Perl, C Shell
- Fixed a number of defects in source code
- Implemented a number of stubs and connectors for new systems integration
- Obtained knowledge of pricing of FI, FX derivatives

Environment: C++, C, Objective C, Perl, FIX, TCP/IP, Socket, Crontab, UML, Oracle, Sybase, MS SQL Server, C Shell, Jira, Confluence, Solaris

System: Ultrabond

Solution for Mortgage-Backed securities data analysis designed as client-server software. Client side has Excel-like interface with tables, figures, charts and support of data import and export to common formats. Platform: C#, Windows. Server side is distributed scalable computing system with single front-end and multiple back-ends, written in C++ for Solaris and Linux. Communication layer is Tibco Rendezvous and ZeroC ICE.

- Participated in planning and development of many small to medium projects
- Added support of new external data feed – an external database, Oracle
- Developed Perl script for conversion and import of historical data form a set of files
- Ported server side software for Windows – the code became cross-platform – Solaris, Linux, Windows
- Implemented general cache server on C#
- Worked with other teams and business users
- Obtained knowledge of valuation of fixed income and in particular Mortgage-Backed securities

Environment: C++, C#, Perl, STL, Boost, Threading, Syncfutsion, Tibco RV, ZeroC ICE, Sybase, Oracle, CppUnit, NUnit, Clearcase, UML, Jira, Confluence Linux, Windows, Solaris

2006 – 2007, Senior Software Developer, CQG ([cqg.com](cqg.com)), Moscow, Russia

Product: CQG for Windows

Solution for all professional trader needs. It includes market coverage for futures, options, fixed income, foreign exchange, equities and indices. It incorporates several different interfaces – depth-of-market order book views, charts, spreadsheets.

- Guided development team of 4 people as a team lead
- Performed performance analysis of the application, found several sources performance bottlenecks
- Delivered 3 projects from 2 to 3 month length
- Designed event based data provisioning for multithreaded user interface
- Implemented new feature – Greeks values on depth-of-market trading interface – one additional column with corresponding valuated numbers – ActiveX control
- Implemented interface improvement – Study Values on depth-of-market – every analytic curve on chart view that has value in price units can be shown on price column of DOM trading interface – ActiveX control
- Used a set of well-known Design Patterns
- Obtained solid knowledge of standard development process – CMMI, PSP, TSP, Scrum
- Obtained remarkable knowledge of financial market terminology and business processes

Environment: C++, COM, ActiveX, STL, Boost, WTL, MFC, CVS, UML, Windows

2004 – 2006, Software Developer, ABBYY (abbyy.com), Moscow, Russia

Product: ABBYY Recognition Server (http://www.abbyy.com/recognition_server/)

Server-based OCR solution for automated document processing designed for high volume workload with transparent scalability and fault tolerance.

- Designed and implemented GUI management console for the server
- Improved scalability for huge-size multipage documents processing
- Ported OCR Engine from Windows to Linux
- Implemented system layer API emulation for Linux
- Developed compiler of Windows resource file language
- Obtained remarkable knowledge of Win32 API and COM technology
- Released first version of the Recognition Server

Environment: C++, STL, MFC, ATL, COM, RPC, MMC, Windows Service, VSS, UML, Windows, Linux

2001 – 2004, Software Developer, Intel (intel.com), Nizhny Novgorod, Russia
Product: Intel Performance Libraries (http://software.intel.com/en-us/articles/intel-ipp/)
Highly optimized cross-platform software functions for multimedia, data processing, and communications applications.
- Obtained outstanding experience in software performance analysis and optimization
- Implemented and highly optimized diverse functions for Intel processors: Pentium 4, Itanium, XScale
- Implemented algorithms for matrix processing, video processing, cryptography, big number arithmetic, XML processing
- Participated in delivery of 4 major releases of Performance Libraries
- Performed competitive performance analysis of MySQL engine built with GCC vs. Intel C++ Compiler. That was done for joint project of Intel Compiler team & MySQL
- Designed several libraries including cryptography and XML processing
- Acquired deep knowledge of cross-platform software development
- Investigated new technology – .Net – using open source implementation from Microsoft
- Proposed a set of improvements for .Net Framework that highlight Intel performance values
- Obtained important experience of working in a global organization and performing to its corporate values
- Coordinated team work of 4 developers
- Honored with a Very Special Thanks Award

Environment: C, C++, C#, Java, P/Invoke, JNI, Assembler, VSS, CVS, StarTeam, BitKeeper, NUnit, JUnit, Rational Purify, Intel VTune, UML, Windows, Linux, PVSC Tracker, Agile, XP

EDUCATION & SERTIFICATIONS

2008 – C++ Programming, International Knowledge Measurement, Score 99%
2001 – MS in Physics, Moscow Institute of Engineering Physics (MEPhI), Russia

EXCELLENT REFERENCES AVAILABLE UPON REQUEST