Dmitry Kalyanov

General Information

Dmitry Kalyanov (Дмитрий Кальянов)

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Education

2004-2009

> Kazan State University, faculty of Computational Mathematics and Cybernetics. Diploma with honors. Participated in programming and math contests.

Additional courses:

- Compilers (Coursera)
- Machine Learning (Coursera)
- Probabilistic Graphical Models (Coursera)
- Artificial Intelligence (Udacity)

Work Experience

2010-2011, 2012 - present; BARS Group, software developer

BARS Group is an enterprise software company with many large customers and many diverse projects. Tech stack is mostly .NET and JavaScript; some projects are written in Java, C++.

Responsibilities include:

- Web application development (backend and frontend)
- Application architecture
- Development of application development platforms
- Development of internal tools

Some notable projects:

- Translator of procedural SQL code from Oracle dialect into PostgreSQL dialect
- Porting large legacy application from Windows to Mono/Linux and modernizing it
- Native code profiling tool
- Implementation of several expression languages
- Custom javascript bundler

2011-2012; Music Services, software developer

Music Services was a product company with one main product: streaming music platform. Tech stack was diverse: Java, C, JavaScript, Android, iOS.

Responsibilities included:

- Application development (backend, web frontend)
- Systems administration

Some notable projects:

- Custom nginx modules
- Distributed replicated storage system

2007-2009; Infomed, software developer

Infomed was a product company that produced several products related to medical imaging. Tech stack was mostly .NET on desktop, OpenGL, C++.

Some notable projects:

- Libraries for DICOM protocol
- Prototype of automated medical image segmentation

2006-2007; RST, software developer

RST (acronym for Rabbit Science Technologies) was a product company related to rabbit farming. Tech stack: .NET

Developed web-based information system. Supported and maintained legacy code. Developed algorithms for data processing.

Experience

- Good knowledge of C, C++, C#, Java, JavaScript, SQL, Common Lisp, Bash.
- Familiarity with: Python, Assembly, R, Rust, Go, Octave.
- Microsoft .NET: .NET Core, Winforms, WPF, ASP.NET (from classic ASP.NET to ASP.NET Core), ADO.NET, NHibernate, Castle.Windsor, Entity Framework (Classic and Core)
- Java: JAX-RS, JDBC, Hibernate
- Web: HTML, CSS, JavaScript, Webpack, ExtJS
- GUI: Gtk+, .NET Winfoms
- Low-level Linux and related tools: libc, pthreads, gdb/lldb, strace, sysdig, perf
- Knowledge of data structures and algorithms
- Multithreading (pthreads, Win32 threads, java threads, .NET threads) and async programming
- Network programming (sockets, epoll, TCP/IP)
- Familiar with system and low-level programming: compilers, garbage collectors, databases.
- Familiar with parsing (ANTLR, PEG, hand-coded parsers).
- Familiar with software testing. Unit testing (NUnit/xUnit, JUnit/TestNG), load testing (JMeter), automated browser-based testing (Selenium); randomized and fuzz testing.
- Basic Linux servers administration. SSH, strace, top, ps, ip, systemd, bash.
- Development tools: Git, SVN, Mercurial, Make, Autotools, Meson, SWIG, Rust bindgen, Jenkins, TeamCity.
- Databases: PostgreSQL, Oracle, SQLite, Microsoft SQL Server, MongoDB, Elasticsearch.
- Some familiarity with (classic) machine learning. Tools: octave, R, jupyter, pandas, scikit-learn.
- Contributions to open-source projects and maintenance of some own open source projects

Hobby projects

TFS to GIT Migration tool

Developed code history migration tool from Microsoft TFS Version Control to Git. Technologies used: C#, Git, libgit2.

Wacom Output Mapping Watcher

Small utility to enforce mapping of wacom tablet coordinates to X11 screens. Technologies used: rust, xcb.

SBCL Win32 Threads

Implemented multithreading in Win32 version of SBCL Common Lisp compiler. Researched low-level details of Windows API, implemented threading and synchronization primitives (mutexes, condition variables, thread creation, thread-local storage). Integrated garbage collector and threading; modified compiler code generator; debugged and tested. Technologies used: cygwin, C, gcc, gdb, SBCL.

cl-gtk2

Common Lisp bindings for Gtk GUI toolkit. Integrated different object systems (GObject object system and Common Lisp Object System), integrated memory management and thread synchronization. Technologies used: SBCL, Gtk+.

Text editor for PDA

Developed text editor for PalmOS-based PDAs. Editor featured text formatting and insertion of images and formulas (with LaTeX notation). Technologies used: C++, FreeType.

Ported several libraries to Palm OS and Windows Mobile.

Ported freetype, sqlite to Palm OS. Ported djvulibre library to Windows Mobile. Technologies used: C++, Windows Mobile.