

Petr Penzin

Software Engineer

Objective

Compiler engineer, where my knowledge of compiler development, several Computer Architectures and platforms is valued.

Technical expertise

Languages	Java, C, R, Ruby, C++, Haskell, Pascal, Fortran
Scripting	Python, Perl, PHP, Bash, CShell, Windows Shell
OS	Linux, Windows, Windows Server, Mac OS X, FreeBSD
Architectures	IA-32, Intel 64, IA-64, ARM, OpenPower
Profilers	PGProf, Oprofile, Java VisualVM, JRockit
Debuggers	GDB, PGDBG, JDB, WinDBG
Configuration	Puppet, Vagrant
Verification	Jenkins, Valgrind, Cmockery
Frameworks	LLVM, Hibernate, JMX, Apache Camel, TIBCO, DCOM, Delphi, MPI, OpenMP, Pthreads, .NET
Development	OOP, UML, Agile Development

Professional Experience

July 2014– **Compiler Engineer**, *The Portland Group, Inc (NVIDIA)*, Beaverton, Oregon.

Current Worked on performance analysis, backend and front-end development, optimizations.

Some projects:

- Future open source Fortran compiler based on Clang/LLVM (ongoing)
Select highlights:
 - Integrated PGI Fortran compiler into Clang
 - Worked on refactoring legacy compiler code
 - Modified Clang to accept Fortran source files and Fortran-specific command line options
- Participated in porting PGI compilers to OpenPower
Select highlights:
 - Analysed benchmark results, investigated correctness errors
 - Maintained compiler's LLVM backend: integrated new versions, provided debugging information support, etc

- Apr 2013– **SW Engineer / Tech Lead**, *UTi Worldwide*, Portland, OR.
- July 2014 Software developer in the Platform team. Worked on performance analysis and system tools, provided recommendations to other teams.
Detailed achievements:
- Deployment request tool
 - Lead a cross-team effort to develop a centralized system for deployment management
 - Implemented SCM integration using client API
 - Gathered requirements and supported change management
 - Developed monitoring tools for TIBCO software
 - Implemented collection of information from Active Matrix enterprise bus and Business Works XSLT engine
 - Used Java Management Extensions to publish the results
 - Implemented statistics collection using R
 - Guided adaptation of Apache Camel as Enterprise Integration framework
- Oct 2011– **JR SW Engineer**, *The Portland Group, Inc (STMicroelectronics)*, Lake Oswego, OR.
- Mar 2013 Intern in the Tools group. Worked on debugger and disassembler
Detailed achievements:
- Optimized Multi-Process Debugging Support
 - Code that worked with all supported platforms.
 - Improved debugger's scalability by changing the internal symbol representation, which provided better support for large scale cluster applications.
 - The change also improved debugger's ASLR support.
 - Developed ARM Disassembler
 - Implemented support for ARM, Neon (aka Advanced SIMD) and VFP Instruction Sets.
 - Communicated efficiently within a team of four people regrading design and output issues.

Education

- 2010–2013 **MS in Computer Science**, *Portland State University*, Portland, Oregon.
Some of the courses taken: Compiler Design, Computer Architecture, Modern Language Processors, Theory Of Computation, Advanced Computer Architecture I and II, Programming Languages
Select projects: Lightweight Just-in-time compiler for Java byte code, Survey of parallel sorting algorithms.
- 2003–2008 **BS in Physics and Computer Science**, *Vologda State Pedagogical University*, Vologda, Russia.
Thesis topic: Numeric Simulation of Hydro-Acoustic Luminescence.
The thesis focused on finding numerical solutions for ordinary differential equation for different acoustic frequencies and different media properties.

Languages

- English **Fluent**
Russian **Native**
German **Basic**