Vladimir Kostyukov

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I am (primary) **System Software Engineer** with 3+ years of experience hacking compilers and VMs. The scope of my interests includes programming languages; functional programming; purely functional data structures; design and analysis of algorithms. My workhorses programming languages are **Java** and **Scala**.

Experience

Software Engineer at Intel Corporation (Novosibirsk), 2011 – present

I am a member of the **Managed Runtimes** team. My first project there was analysis bottlenecks of the SPECjvm2008.serial test at Intel's modern architectures. The suggested solution (based on reducing number of stack frames) showed up to 50% speedup on WSM-EX (in a multithreaded mode).

In the next project, I was developing (from scratch) a proof of concept PKCS#11 Java Crypto Provider (5k LOC) based on Intel IPP libraries. The developed prototype shows 6X speedup relative to the default Java implementation.

I am now hacking x86 Trace-JIT compiler for Dalvik VM.

Technologies: Linux Shell, Git, Gerrit, Bugzilla, GCC, Intel VTune, Vim, Intel TBB, Intel IPP, SPECjvm2008, Eclipse

Software Intern at Intel Corporation (Novosibirsk), 2010 – 2011

As a member of **Compilers and Languages** group I was responsible for performance tracking and analysis of Intel Compiler for MIC platform (a GPUGP chip with up to 128 cores). I gained an Intel SSG Award for being a pioneer of Intel MIC compiler performance tracking (developed a Perl-based harness and ported initial four workloads from NVidia CUDA SDK).

Technologies: Intel Compiler Collections, Perl, Intel VTune, Linux Shell

Technician at Altai State Technical University (Barnaul), 2010 – 2011

While working in **IT** department, I was responsible for maintaining network environment of university campus. I also was leading a technical support team of ACM ICPC NEERC.

Technologies: Linux Shell, Clonezilla

Projects *

la4j (Linear Algebra for Java)

The la4j is an open source and 100% Java library that provides Linear Algebra primitives and algorithms. It is currently one of the most popular sparse/dense matrix libraries for Java.

Technologies: Java SE, Eclipse, TDD, Maven, jUnit, Git, Travis-CI

Quipu (Esoteric Programming Language)

The Quipu is an Esoteric programming language inspired by "talking knots" – recording devices historically used by Incas.

Technologies: Scala

***** There are also dozens of other projects and open source activities at my github page.

Education

Master of Science in CS, Altai State Technical University (Barnaul), 2006-2011