Nikolay Kurtov

Senior SWE-SRE at YouTube
nkurtov@gmail.com
+41795061891

Experience

Tech Lead of YouTube Core SRE at Google
Oct 2018 - Present
Improved reliability and efficiency of `youtube.com` by:

- Driving end-to-end success metrics up
- Developing a dependency management framework for C++ micro-services
- Getting new services production-ready and onboarding them to SRE

Knowledge Graph infrastructure at Google
2016 - 2018
Developed a new critical piece of infrastructure, improving reliability and throughput of the system. Designed and developed multiple components of the system, APIs for other teams.

Knowledge Graph quality at Google
2015
Improved Machine learning models reconciling music entities, affecting 0.3% of all web search traffic.

Geo logs processing at Google
2014
Extracted new metrics from usage logs and made them easily accessible to developers.

Geo data quality at Google
2013
Designed and implemented a high-precision machine learning system, removed duplicate business listings from the map of Russia.

Google Offers
2011 - 2012
Developed a system for personalized offers targeting both for email distribution and online distribution.

Software Engineer at Intel
2010 - 2011
Optimized Intel C++ Compiler for benchmarks CPU2000 and EEMBC1.1 on Atom

Intern Software Engineer at Intel
2008 - 2010
Developed distributed memory runtime for Intel Concurrent Collections for C++: https://icnc.github.io/

Intel Student Laboratory
2008
Added support for edge profiling in Apache Harmony Jitrino.JET compiler.

xored software
2007
Quality Assurance, Webmaster, managed Continuous Integration and administered Debian servers.

SWSoft Student Laboratory
2006
Developed a 3D-physics engine for one game, and level generation and sound programming for another game.

Skills

- 14 years of experience with C++
- 3 years of experience with Python
- 1 year of experience with Go and Java
- Fluency in Haskell, Rust and Java
- Software reliability engineering
- Large-scale systems design
- Data structures, algorithms and complexity analysis
- Shared and distributed memory parallel programming
- Optimization for Intel microarchitecture

Open-source projects

- **Hive Qt** - a desktop client for playing Hive, written in C++. https://bitbucket.org/orfest/hive_qt/src
- **AppleSID** - tracks signal amplitude of VLF radio stations to detect Solar Flares. Written in Rust. https://nest.pijul.com/orfest/applesid
- **TwilightAlign** - simple Rust tool for aligning Sun images. https://nest.pijul.com/orfest/twilightalign
- **Hive Web** - Web client for playing Hive, written in Haskell. https://hub.darcs.net/orfest/hiveweb
- **OnlineJudge CLI** - a set of Python tools for command-line access to online judge systems: UVa, Timus, Codeforces. https://bitbucket.org/orfest/onlinejudge-cli/
- **TSP Flaming** - solution of the travelling salesman problem using the Simulated Annealing method. http://tspflaming.sourceforge.net

Education

MS in Computer Science, 2009 - 2011
Novosibirsk State University. GPA 5.00 (100%)

BS in Computer Science, 2005 - 2009
Novosibirsk State University. GPA 5.00 (100%)

Hobbies

- Running, Marathon personal best time - 3h25m
- Bouldering
- Astronomy. Built a solar projection telescope

Programming Competitions

1. 14th place at the ACM ICPC World Finals 2010 in Harbin

2. 27th place at the ACM ICPC World Finals 2011 in Orlando
3. 11th place at the Yandex Open 2010 onsite round

Languages

- English - fluent
- German - intermediate (B1)
- Russian - native speaker