

Jonathan Roelofs
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Experience

Apolent Corporation: HPC Software Engineer. (Feb '11-present)

- HPC consulting with a focus on SSE vectorization of image processing and dense linear algebra kernels. Minor work on a Hadoop Streaming test framework.

Intern for Intel's IA64 Performance Validation Team, Fort Collins, CO (May '10-Aug '10)

- Kernel drivers and user-land tools for manipulating hardware performance counters.

Intern for Intel's Software Solutions Group, Nashua, NH. (Jun '09-Aug '09)

- Usage testing for Intel Parallel Advisor. OpenMP parallelization of several SPEC 2006 benchmarks.

Undergraduate Research Assistant for Dr. Michelle Strout at CSU. (Dec '08-May '11)

- Implemented asynchronous and bulk synchronous parallelizations of the Jacobi linear algebra benchmark using Intel CnC and OpenMP.

Support Director, Camp Counselor and Quartermaster for the BSA. (Summer '07, and '08)

Personal & Open Source Projects

PolyViz – N-dimensional polyhedral visualizer using the Ogre3D rendering engine (C++)

Tiling Visualizer – 2-dimensional tiled polyhedron visualizer (Java)

Physics Simulator – 2-dimensional spring & mass physics simulator (Java)

Parallel Mandelbrot – Parallel implementation of a Mandelbrot set viewer (Java+RMI)

Education

Colorado State University - Fort Collins, CO

Degree: Bachelors of Science

Majors: Computer Science and Mathematics

Graduation date: May 2011. GPA: 3.46

Related Coursework:

CS270 – Computer Organization	M281 – Intro to Mathematical Reasoning
CS301 – Foundations of Computer Science	M301 – Combinatorics
CS356 – System Security	M317 – Advanced Calc of One Variable
CS370 – Systems Architecture and Software	M345 – Differential Equations
CS440 – Artificial Intelligence	M360 – Mathematics of Information Security
CS453 – Intro to Compiler Construction	M369 – Linear Algebra I
CS454 – Programming Languages	M460 – Information and Coding Theory
CS475 – Parallel Programming	M466 – Abstract Algebra I
CS598 – Research	M467 – Abstract Algebra II
CS553 – Algorithmic Language Compilers	M469 – Linear Algebra II
CS560 – Polyhedral Model of Computing	M472 – Introduction to Topology

Red Rocks Community College - Lakewood, CO

GPA: 4.0

Awards

Eagle Scout

Varsity Letterman - Swimming, Theater Tech

Sites-Regelson Undergraduate Research Fellowship

Skills

Languages: C, C++, SSE Vector Intrinsics, Intel CnC, Java, MIPS, MPI, OpenMP, Perl, Bash, Lisp

Libraries & Tools: Linux, Linux Kernel, OS X, Gdb, Valgrind, SVN, Git, Perfmon

References available on request. Last updated 6/28/11.