Benjamin Johnson

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EDUCATION Harvey Mudd College, Claremont, California Expected Graduation: May 2016

Physics Major

SELECTED COURSEWORK

Data Structures & Program Dev. Discrete Mathematics Theoretical Mechanics
Computational Biology Intermediate Linear Algebra Quantum Mechanics

Adv. Topics in Algorithms Mathematical Analysis I Quantum Information

Software Proficient: LATEX, Python, C/C++, Java.

Skills Familiar: *nix Shell Scripting, Mathematica, Igor Pro, Matlab, Html.

WORK Software Engineering Intern May 2014 – August 2014

Experience Google, Mountain View, California

Worked on the web rendering pipeline within the Knowledge: Search Infrastructure group.

• Wrote the foundation of a new load-management framework for all back-end web rendering.

Computer Science Grader and Tutor September 2012 – December 2013

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Technical Intern, Level 3 May 2013 – August 2013

Pacific Northwest National Laboratory, Richland, Washington

Worked on social media analytics and algorithm development in the Knowledge Discovery and Informatics group (kdi.pnnl.gov). Sponsored by the National Security Internship Program (science-ed.pnnl.gov/nsip).

- Rebuilt corrupt 12 TiB document index from 83 TiB raw data store.
- Developed flexible load balancer for social media search framework running on a Slurm cluster.

Student Researcher June 2012 – July 2012

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Worked independently to set up and operate a real-time system for monitoring local atmospheric levels of light-absorbing, water-soluble organic aerosol. For more information on the Hawkins Lab: hmc.edu/hawkinslab

OTHER Server Administrator May 2012 - Present

Project Experience Claremont, California

Independent project providing general-purpose shared storage for the school community as well as local mirrors of external resources. Took over from a graduating senior.

- Reconfigured Arch Linux installation to utilize recent system improvements like systemd.
- Extended available storage space from 9 TiB to 36 TiB.
- Added mirrors of open source project repositories including Arch Linux, Ctan, Gnu, Apache, English Wikipedia, and Wikileaks.

Data Structures and Program Development

January 2012 – May 2012

Harvey Mudd College, Claremont, California

Software development course in C++ utilizing Subversion, Valgrind, and Gdb. Projects were pair-programmed and included a Risc memory cache simulator, a spell checker, a learning rock-paper-scissors player, refactoring a genetic algorithm, and implementations of BigInt, HashSet, and TreeSet.

Activities Windward Intercollegiate Code War January 2012, 2013

Worked in a team of five to implement a solution to an artificial intelligence challenge in 8 hours. Solutions were run against competing teams from other colleges across the country.