Austin Reilley Benson

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Objective

- Fall 2012 admission to a computer science Ph.D. program with a research emphasis in high-performance computing, numerical linear algebra, and distributed systems

Education

- University of California, Berkeley Expected Graduation: May 2012
  - B.S. Computer Science and Engineering
  - B.A. Applied Mathematics (algorithms emphasis)
  - GPA: 3.86/4.0
  - Coursework: (CS) Operating systems, parallel computing, artificial intelligence, algorithms; (Math) Matrix computations, numerical analysis, probability theory, stochastic processes, algebra, analysis

Research and Work Experience

- **Google, Inc.** May 2011-August 2011
  Software Engineering Intern, Google Chrome Team
  - Designed and implemented the nacl-mounts library, a pluggable user-space file system for Google's Native Client which allows for storage to various back-end devices
  - Increased the distribution of the naclports build system from 3 to 26 machines
- **University of California, Berkeley** April 2011-Present
  Undergraduate Researcher, Computer Science Division, Berkeley Benchmarking and Optimization Group
  Advisor: Professor James Demmel
  - Researching parallel algorithms for numerical linear algebra in cloud computing environments
  - Exploring communication-avoiding optimizations for matrix computations in Apache Hadoop
- **Domestic Nuclear Threat Security Initiative** June 2010-Present
  Undergraduate Researcher and Software Engineer
  - Developing a parallel and multi-platform framework for implementing nuclear detector software that detects nuclear sources and prevents nuclear threats in real time
  - Responsible for data analysis, dynamic code generation tools, parallelization, and scalability
- **University of California, Berkeley** April 2010-October 2010
  Undergraduate Researcher, Department of Industrial Engineering and Operations Research
  Advisor: Professor Dorit Hochbaum
  - Implemented Matlab software for analysis of MRI sequences of 160 patients from medical studies on patterns of development of knee osteoarthritis

Involvement

- Research Affiliate, Lawrence Berkeley National Laboratory
- Member, Tau Beta Pi, The Engineering Honor Society
- Member, Eta Kappa Nu, The Electrical Engineering and Computer Sciences Honor Society
- Member, Alpha Pi Mu, The Industrial Engineering and Operations Research Honor Society
- Lab Assistant, CS 61C–Great Ideas in Computer Architecture

Skills

- Languages: (Proficient): C, C++, Java, Python, Matlab, bash; (Experience): Perl, JavaScript
- Misc. Computing Tools: Apache Hadoop, Google App Engine, Qt, LaTeX , CUDA, OpenMP, MPI, git, svn
- Operating Systems: OS X, Linux