Alexander Neilson

Junior Developer

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Personal Profile

I'm a passionate problem solver with strong computer science fundamentals that make me a quick and adaptive learner. I pride myself on my ability to clearly communicate and exchange ideas with teammates. I'm seeking an entry level developer position so I can share my passion with a team and start making great things together.

Education

University of California at Berkeley

Computer Science - Cognitive Science

Selected Courses

- CS61A - Structure and Interpretation of Computer Programs
- CS61BL - Data Structures (Lab Based)
- CS61C - Machine Structures
- CS70 - Discrete Mathematics and Probability
- CS162 - Operating Systems
- CS188 - Artificial Intelligence
- CS164 - Languages and Compilers

Languages and Skills

Proficient With:

- Java
- Python
- Scheme
- Unix environment
- Regex
- Eclipse IDE
- Emacs

Experience With:

- Ruby/Rails
- Git/SVN
- jUnit
- HTML/CSS
- Javascript
- PostgresSQL

Projects

Distributed Key-Value Store

Worked with a team of four other students to implement a key value storage sys- tem with a master server and multiple slave servers. Wrote the client side API and test suites using jUnit and the mocking framework Mockito. Coordinated with classmates using git.

Reinforcement Learning Agent

Solved pacman mazes using artificial intelligence techniques. Implemented value iteration and q-learning in Python to iteratively update the utility value of maze tiles and develop an optimum policy for maze traversal.

MapReduce Co-occurence Rates

Used the Hadoop framework to measure the statistical association between two words in a corpus. Ran on clusters of 5 and 9 Amazon EC2 clusters over a 90GB corpus.

Fast Matrix Multiply

Used SIMD instructions, register blocking, loop unrolling, and other optimiza- tion tricks in C to obtain a 20x speedup for a matrix multiply function.