PAUL REVERE, IV

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EDUCATION

RENSSELAER POLYTECHNIC INSTITUTE

B.S. in Computer Science, Minor in Economics - GPA: 3.24

August 2013 to December 2016 - rpi.edu

EXPERIENCE

QUANTCAST

Software Engineer Intern - Big Data Services

Summer of 2016 - San Francisco, CA - quantcast.com

- Contributed to Java system for compiling SQL-like queries into MapReduce jobs, a tool used by modeling and research teams to analyze petabytes of data on a computing cluster.
- Implemented changes to add predicate pushdown to database reads when possible, leading to efficiency gains of 10x in some cases and reduced time spent on I/O operations.
- Redesigned and implemented broadcast joins of data sets allowing for more flexible usage.
- Improved underlying testing system to ensure complete usage of unit and integration tests.

RPI SCIENTIFIC COMPUTATION RESEARCH CENTER

Undergraduate Researcher

September 2015 to May 2016 - Troy, NY - scorec.rpi.edu

- Contributed to open source C and C++ infrastructure for FEA simulations on supercomputers.
- Implemented a binary encoding scheme for increased precision in mesh visualization files.
- Implemented compression scheme that lead to a 3x reduction in file size.
- Developed a system to accommodate for issues that arise when writing output files in massively parallel environments with thousands of processes writing at a time.

KNOLLS ATOMIC POWER LABORATORY

Technical Intern - Reactor Technology

Summer of 2015 - Niskayuna, NY

- Worked on a large-scale Java project used by engineers to design reactors for the U.S. Navy.
- Implemented systems for statistical sampling of nuclear data to reduce input size for a larger scientific computing application.
- Reduced run time by orders of magnitude from the original system design by cutting out redundant calculations and reduced memory usage by discarding unneeded data early on.

TECHNICAL SKILLS

Java
C/C++
Python
Git
Subversion
Linux
Distributed Systems
Scientific Computing
Test Driven Development

RELEVANT COURSES

Data Structures
Algorithms
Operating Systems
Programming Languages
Software Design & Documentation
Distributed Systems & Algorithms
Distributed Computation Theory
Machine Learning
Data Mining
Artificial Intelligence

LEADERSHIP

SIGMA ALPHA EPSILON FRATERNITY

Vice President

December 2015 to June 2016

- Oversaw and managed officers of a 75 member fraternity with a $250,000 annual budget. Advised in event planning and goal setting for 6 months.

Recruitment Chairman

December 2014 to December 2015

- Managed a $10,000 budget for one year dedicated towards organizing recruitment events. Organized series of recruitment events and lead a fraternity of 60 members to recruit a new class.