Louis Rassaby

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Education

Tufts University – Medford, MA
Bachelor of Science, Computer Science, Minor: Economics – December 2014
G.P.A. 3.93, *summa cum laude*, Dean's List 7/7 semesters, National Merit Scholar

Languages

Primary languages: Scala (Slick, Spray, Wicket), Ruby (Rails), Python, C/C++, Java, JavaScript, SQL (Postgres)
Other languages: Haskell, ML, Scheme, C#, Graphics (OpenGL, GLSL, Processing, d3), Ext.js, Node.js

Experience

Recombine – New York, NY – *Software Engineer* Feb. 2015 – Present
- Leveraged cutting-edge genomics to transform large sets of biological data into actionable results in a concurrent, high-performance Scala API built on Spray/Akka
- Revamped patient reporting, including complete report internationalization and optimizing the speed of report generation by 400%
- Designed new dual-index schema for demultiplexing sequencing samples through a constrained optimization algorithm
- Engineering lead for FertilityMap research and product

CUAHSI – Medford, MA – *Undergraduate Research Assistant* Sept. 2014 – Dec. 2014
- Created mapping between two hydrological ontologies using graph isomorphism and fuzzy matching

Tufts University EECS Department – Medford, MA – *Teaching Assistant* Sept. 2013 – Dec. 2014
- Dedicated 20 hours weekly to explaining concepts and assignments to students
- Instructed students in groups and one-on-one to debug C, assembly code, C++, Scheme, and ML

GE Intelligent Platforms – Foxboro, MA – *EID Software Engineering Intern* May – Aug. 2014
- Implemented module for internationalization management and Pig Latin language pack for unit testing
- Ported Chrome-only web app to IE, solving one of the most significant customer-facing issues
- Isolated and resolved SQL deadlock errors that were causing intermittent errors for the client

Avast Antivirus – Prague, Czech Republic – *Software Engineering Intern* June – Aug. 2013
- Designed and implemented a suite of intelligent client crash management tools, including a dashboard to display data and analytics to prioritize bug fixes and integration with product management software
- Created secure virtual machine reservation service to reserve and load disk images onto virtual machines

Projects

Phantom Echoes: Designed and built music adventure game, using landscapes and obstacles based on sampled melody and tempo from user-selected songs; winner of The Echo Nest's "Prize for Excellence" at Tufts Hack 2013
Ostracon: Created a framework in Erlang and JavaScript for asynchronous distributed apps and games
OpenGL: Created multithreaded recursive ray tracer supporting a wide range of complex rendering techniques in C++; developed sophisticated animated particle system using GPU shaders
Distributed hash table: Created distributed hash table in C with strong partition tolerance and consistency
Universal machine: Built virtual 13-opcode universal machine in C and wrote RPN calculator in its language

Activities & Interests

Fairytales, *acting, music, and graphics visualizations for a performance art piece* Apr. 2016 – Present
Jazz Cello, *weekly jazz performances* Dec. 2015 – Present
Open Brain, *poetry and music performance* Jul. 2015 – Present
Other
CrossFit, Tufts Computer Science Exchange, Tufts Symphony Orchestra (Principal Cellist), Volunteer Orchestra Instructor, Cello Teacher