

# 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

**Techniques:**

## 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