

# Thomas Ramfjord

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github.com/ramfjord

## Work

- Software Engineer at Quantcast (San Francisco) 2013-present
- Ingested data from internal and external sources into our PostgreSQL reporting database. Reduced import times from hours to minutes. Decoupled imports so that one failure didn't affect others. Reduced failure rate by ~90%.
  - Moved infrastructure from internal cloud to AWS, including a critical database and several microservices. Improved reliability with autoscaling and multi-AZ deployments.
  - Created a monitoring service which was used across the company to send job performance info to nagios/datadog for alerting, once again to improve job reliability.
  - Advocated scrum practices which were adopted by the team to improve velocity and decrease conflict.
  - Broke apart a core data pipeline which processed all event level data ingested by Quantcast into component parts. This allowed downstream jobs to process only what they needed, improving their performance by up to 90%.
- Cofounder of SmarterGrades (New Delhi) 2011-2013
- SmarterGrades was an experimental project to personalize math education in India. Students would receive personalized problem sets, to be graded automatically. It estimated a student's proficiency at a problem class, rewarding students for problems that were neither too easy nor too hard.
  - Completed interactive problem generators for the 6th Grade CBSE (Indian government standard) curriculum.
  - Sold assets to Learn Today, subsidiary of India Today (May 2013)
- Student Network Assistant for Oberlin College 2010-2011
- Wrote perl scripts for automating network tasks previously done by hand. They did not hire another Student Network Assistant the subsequent year.
  - Set up and maintained network diagnostic tools such as flowtools and NDT. Installed and configured ipv6 network software such as DHCP, snmptrap, and syslog-ng
- Intern at Rampleaf Summer 2010
- Designed and implemented a generic web crawler for directory sites, which inferred relationships within the web page based on proximity
- Intern for Professor Ben Kuperman Summer 2009
- Worked on audlib, a security program that generates audit data by intercepting and recording C library function calls on all ELF executables
  - Benchmarked audlib against auditd, which intercepts system calls to do the same

## School

- Oberlin College 2007-2011
- B.A. with high honors in Computer Science
- Select Coursework
- Honors project: a spread spectrum audio watermark encoder and decoder (c)
  - Various AI algorithms: Bayes networks, backpropagation on neural networks, decision trees, minimax search (java)
  - All major data structures (java)

## Skills

Conjuring arbitrary SQL queries quickly without having to consult documentation

Implementing JSON API endpoints in less code than you thought possible

Carefully considering the long term impact of architectural and design decisions

Tests figuratively everything

Advocating agile/scrum development philosophy to improve productivity and estimation and to keep a tight customer feedback loop.

Navigating VIM at the speed of thought

## Play

- Sample Personal Projects (github.com/ramfjord)
- A javascript chess board with added notation to help beginners learn about key concepts (forks, hanging pieces, pins, counting attacks)
  - Linear Program Solver: uses & demonstrates the simplex method and tableaus (C)
  - C Trie: an experiment in C generics and the Trie data structure (a personal fav)
- Competitive programming 2008-2011
- Participated in the ACP-ICPC Regionals and Denison Spring Programming Competition 3 times each
- Favorite Video Games 2016-2017
- The Witness, Darkest Dungeon, Overwatch, Hotline Miami 2