Katie Siegel

ksiegel@mit.edu | 408.691.8871 | ktsiegel.com | github.com/kathrynsiegel

EDUCATION

Massachusetts Institute of Technology 2012-present

M.Eng., Computer Science with a concentration in computer systems, expected June 2016
S.B., Computer Science and Engineering, expected June 2016 (GPA: 5.0/5.0)

- Eta Kappa Nu (HKN) honors society executive board member

SKILLS

Programming Languages	C, C++, Go, HTML/CSS, Java, JavaScript, Objective C, Python, Ruby, Swift
Frameworks and Tools	Flask, GDB, Git, Hadoop, iOS, LaTeX, node.js, Pebble, perf, SQL, Ruby on Rails
Selected coursework	Data Structures, Algorithms, Computer Systems, Database Systems, Distributed Systems, Machine Learning, Performance Engineering, Statistics, Web Software Studio
Current coursework	Computer Vision, Computer Systems Security

EXPERIENCE

MemSQL | Query Execution Infrastructure Intern San Francisco | June-Aug 2015

- Optimized hash joins by implementing and integrating a grace hash table.
- Implemented spilling to disk during hash joins using a custom allocator.
- Conducted performance analysis of query execution optimization strategies.
- Fixed issues involving column store query execution.

Dropbox | Mailbox iOS Intern San Francisco | June-Aug 2014

- Implemented Bluetooth keyboard integration in the Mailbox iOS app.
- Designed and prototyped an analytics dashboard displaying Mailbox iOS usage.
- Won a Hack Week team award for a feature adding write-only shared folders for content collection.

Square | Information Security Intern San Francisco | June-Aug 2013

- Developed an internal Rails site that reads and displays security data from Hadoop.
- Added elastic search and other features to Rails internationalization software.

RESEARCH AND SELECTED PROJECTS

H-Store Implementation of replication strategies in H-Store, a research effort in the MIT Databases Lab.

Zauberflöte Distributed peer-to-peer content delivery system utilizing WebRTC and a BitTorrent-like tracker.

SkipChat A secure, distributed, bluetooth peer-to-peer messaging service that hops network discontinuities.

- Top 10 at MHacks V

nunchuck.js Open-source library for real-time hardware data synchronization between mobile and desktop browsers.

- 2nd place at YCHacks

EDUvote Lecture planning software that facilitates real-time feedback to in-class questions via text messaging.

- First place in 6.170, MIT's Software Studio class

TEACHING

6.170: Software Studio | Teaching Assistant fall 2014, 2015

- Instructed students how to design and construct medium-scale web applications using node.js.
- Taught recitations, coached teams through design and development of final projects, and graded assignments.

LEADERSHIP

HackMIT 2013-2014

- Founded and directed MIT's largest hackathon.
- Raised $300k+ in sponsorship and organized logistics for 1000+ attendees.
- Oversaw the development of hackathon tech tools such as a judging app and a registration system.