# Geoffrey Thomas

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## Education

**Massachusetts Institute of Technology, Cambridge, MA** *Sept. 2006 – present*

S.B. awarded June 2011 and M.Eng. expected December 2011 in Computer Science and Engineering. Graduate-level coursework includes operating systems, distributed filesystems, large-scale symbolic programming, computer and network security, and the theory of computation. M.Eng. GPA: 5.0/5.0.

## Experience

**MIT Department of Electrical Engineering and Computer Science** *Sept. 2010 – present*

- Served as teaching assistant for 6.046 "Design and Analysis of Algorithms" fall 2010, 6.857 "Network and Computer Security" spring 2011 and 6.858 "Computer Systems Security" fall 2011. Responsibilities have included homework and quiz design, grading, and office hours.
- Taught two recitations (40 students) per week for 6.046.
- Architected redesign of 6.858 lab code to allow for an additional lab on sandboxing as well as for a rewrite from PHP to Python.

**VMware, Inc.** *June – Aug. 2010*

- Prototyped predictive dynamic resource allocation using low-level and high-level performance counters.

**Ksplice, Inc.** *June – Aug. 2009, Jan. 2010*

- Worked with a young startup on bringing new technology for rebootless Linux kernel updates to market.
- Developed client application (GUI and systems programming) and build infrastructure.

**Akamai Technologies** *June – August 2008*

- Designed and implemented a framework for kernel-level rootkit detection for Akamai's global network.

**MIT/CSAIL Parallel and Distributed Operating Systems Group** *May – Dec. 2007*

- Implemented Linux driver support for a new smartphone's hardware, for use by other CSAIL groups.

## Activities

**MIT Student Information Processing Board** *Sept. 2006 – present*

Member of MIT's volunteer student computing group, providing services to MIT and broader community. Organize projects, develop software, and maintain servers; provide user support by e-mail and in person.

- Co-maintain and serve as project architect for scripts.mit.edu, MIT's student-run dynamic web hosting service with eight servers and three thousand hosting accounts. Responsible for system administration, design, development, training of new team members, support, and security response.
- Co-maintain the Debathena project, a student-developed implementation of MIT's Athena system for Debian and Ubuntu that has been popular on personal computers. Collaborated with MIT IS&T on Debathena being adopted as the official Athena client distribution for hundreds of workstations campuswide since summer 2009.
- Taught January-term classes to MIT students and staff on C, C++, git, gdb, and other topics.
- Developed IRC support and other improvements for the free software BarnOwl messaging client.
- In 2010, SIPB won the Karl Taylor Compton Prize, MIT's highest award for students or student groups.

## Skills

- Experienced in C, Python, C++, bash, Perl, *x*86 assembly, LaTeX, Scheme, and many other languages.
- Adept in development and administration of Linux/UNIX-based environments (particularly Ubuntu, Debian, and Fedora, as well as Mac OS X) on both server and desktop environments.
- Well-practiced in Debian packaging, git and other version control systems, and many other aspects of free/open-source software development, including collaborative development.

## Publications

J. Arnold, T. Abbott, W. Daher, G. Price, N. Elhage, G. Thomas, and A. Kaseorg. "Security Impact Ratings Considered Harmful." 12th USENIX Workshop on Hot Topics in Operating Systems. May 2009.