

# Michael Stone

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## Goal

I want to use my gifts as a mathematician, programmer, writer, and artist to produce potent artifacts, e.g., of software and process.

## Education

Bachelor of Arts with High Honors, Swarthmore College, June 2007.

*Major:* Mathematics & Statistics. *Minor:* English Literature. *Notable Classes:*

Pure Math	Algebra, Real Analysis, Topology, Category Theory, Probability, Statistics
CS	Digital Systems, Mobile Robotics, Computer Graphics, Computer Architecture
Arts	Book Arts, Landscape Painting, Oil Painting, "Western Art" Survey, "Michelangelo"

*Summary:* Mathematics taught me rigor. CS taught me to get my hands dirty. Art and literature taught me how to work with words, images, and sensations.

## Skills

langs 1	:C, :C++, :Python	langs 2	:Scheme, :Haskell, :Java, :PHP, :VHDL, :bash, :TEX
web langs	:XML, :XHTML, :CSS, :SQL, :JS, :RDF	build	:GNU Make, :autotools, :scons
web rfcs	:DNS, :HTTP, :SMTP, :POP3, :XMPP	network	:IEEE 802, :802.11b/g, :IPv4, :IPv6, :TCP4, :UDP
web libs	:Django, :Pylons, :PHP4/Smarty	scm	:git, :svn, :cvs, :hg, :bzd, :mtn
2.6 kernel	:VFS, :LSM, :socket, :scheduler, :initramfs	libs	:glibc, :D-Bus, :NM, :gobject, :GTK2, :Twisted
nat langs	:English, :French, :Spanish, :Hindi	legend	:expert, :proficient, :familiar

## Employment

### Release Manager, *One Laptop per Child*

March 2008-Jan 2009

In 34 weeks, I defined a new release process, became OLPC's release manager, and, in concert with representatives from PM, QA, Engin, and Biz, managed a distributed team of employees, contractors, and community members which integrated changes that closed approximately 1,000 tickets, including a complete UI redesign. The release shipped within 6 weeks of the target month, with only two serious regressions, to positive reviews on Amazon and in the OLPC software community at large.

### Software Developer, *One Laptop per Child*

June 2007-March 2008

I delivered portions of OLPC's "Bitfrost" security system including its activity isolation framework, parts of its software theft deterrence system, and its secure update system. This work addressed the technical problem of safeguarding the education of hundreds of thousands of children and the commercial problem of convincing several governments to purchase Linux-based educational laptops from an untested startup. Later, I automated OLPC's build infrastructure after employee turnover left the project without working builds, helped OLPC to improve its working relationship with Fedora (its upstream Linux distribution), and precipitated its most successful summer internship program to date.

### Consultant, *Judy Stone, MD PA*

2005-2007

In the summer of 2005, I shadowed physicians for several weeks to better understand biomedical and bioinformatics needs. Subsequently, I was employed part-time from 2005-6 developing prototypes for scheduling and contact management software for a physician's practice. Most recently, I have been employed part-time to make budget projections, to coordinate online advertising, and to provide technical support for author appearances for Mountainside MD Press, a subsidiary of my employer.

### Student Researcher, *Swarthmore College*

Summer 2006

I performed 10 weeks' paid mathematical research at Swarthmore as a Howard Hughes Medical Institute Fellow where I researched diagram languages for category theory and developed a poster to explain a mathematician's perspective on the essence of computer programs for a non-specialist audience. The poster's presentation earned me an associate membership in Sigma Xi.

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## Projects

### **Tutoring**, *various*

1997 - 2006

I began tutoring students in math, English, and computer science in middle school. Recently, I tutored a fellow student preparing for the math portion of the GRE general exam and I acted as an unofficial lab aide for classes on computer graphics and digital systems.

I have also consulted on debugging problems for a diverse audience ranging from beginning programmers, to a local statistician and experienced CS majors working on stock trading software, parallel neural network training algorithms, and Linux kernel drivers.

In 2004, I tutored CS students and a local statistician in introductory programming classes. Also, in the summer of 2004, I taught English in an elementary school in Dharamsala, India.

### **Visualization**, *Swarthmore College*

2005-2006

- Supported my robotics team's work with map visualizations which were invaluable debugging and explanatory aids.
- Improved a low-dimensional visualization tool called a "color histogram".

### **Programming**, *various*

1999-present

I have worked on cryptographic software, a Windows keylogger, an early Gnutella (filesharing) client, a web-based community event planner with car-pool matchmaking services, a geometry source for producing artwork on a rapid prototyping machine, a hardware sensor for monitoring laundry machine status, and numerous one-off projects and scripts for myself and my friends.

As a volunteer, I have participated in the open source world by contributing bug reports, tests, minor patches, and design suggestions to projects including OGRE (objected-oriented 3-D graphics), Monotone (version control), Perl 6 (language), and the OLPC (One Laptop per Child) project.

Three intermediate projects for OLPC included a build system (Puritan), an IRC bot for collaborative ticket triage, and a relational library for Python.

### **Statistics**, *various*

2005, 1999

- Analyzed the metaphor of "issue space" in which American voters and candidates purportedly locate one another.
- Compared the efficacy of hydroponics treatments.

### **Organizations**, *Swarthmore College*

2006

In 2006, I started a student group, "Swat Clean Hands", dedicated to improving public health at Swarthmore by improving hand hygiene.

I also sang a cappella for four years with "Chaverim".

## Honors and Awards

During high school, I succeeded in local science fairs and attended the Intel International Science and Engineering Fair (ISEF) three times on the basis of my programming projects. I also did well in mathematical contests and on standardized tests (SAT: 780 Math, 720 Verbal, GRE General: 800 Math, 680 Verbal, 5.5 Analytical Writing).

At Swarthmore, I graduated with High Honors and I earned associate membership in Sigma Xi, the Scientific Research Society. I have also successfully competed in regional ACM programming competitions and in the 2006 ICFP Programming Contest.

However, the greatest honor that I have earned is not one awarded by a committee or competition – instead it is the respect of my peers and teachers for my competence, my enthusiasm, and my ability to ask good questions.