

E. LILY SEROPIAN

*I want to use my
coding powers to do
good in the world.*

lilyseropian@gmail.com • (203) 752-7327

EDUCATION

Massachusetts Institute of Technology (MIT) • Cambridge, MA • GPA 4.8/5.0

June 2015 candidate for a Bachelor of Science Degree in Computer Science with a Spanish concentration.

Relevant Coursework: Software Studio, Artificial Intelligence, Software Design, Algorithms, Computer System Design, Machine Learning, Digital Architecture, Computational Biology, Discrete Mathematics, Probability, Linear Algebra, Presenting Technical Material.

Yale University • Fall 2010 in New Haven, CT

Received scholarship through Governor's Scholar Program to take Mathematical Tools for Computer Science.

North Haven High School • Valedictorian • Fall 2007 through Spring 2011 in North Haven, CT

Independent studies in data structures and genetic algorithms.

Lab assistant for introductory programming class taught in C++. Teaching assistant for French I.

Vice President of Mu Alpha Theta, President of French Honor Society, and Member of National Honor Society.

National Merit Scholar.

SKILLS

Programming/markup languages: Java, Python (including NumPy and SciPy), JavaScript (including node.js, Angular, TypeScript, and Google Closure), HTML, CSS, LaTeX.

Technologies: Git, Unit Testing Frameworks (TDD and BDD), Eclipse, WebStorm, Idle, BlueJ, Sublime, Vim, Linux, Mac, Windows.

Human languages: Spanish - conversational, French - conversational, Japanese - basic.

Interests: knitting/crocheting, music, language, sci-fi, teaching, women's and gender studies, the art of rationality.

WORK EXPERIENCE

Massachusetts Institute of Technology • Teaching Assistant for 6.UAT • Fall 2014 at MIT

Taught 2 recitations of 8 students each for a hands-on class on giving effective technical oral presentations. Gave feedback on in-class presentations, assisted during lectures, held office hours, and graded.

B-Line Medical • Intern • Summer 2014 in Washington, DC

Created question builder site using reusable angular.js components. Wrote node.js backend to hook site up to existing SQL databases with sqlite. Managed build configuration with grunt.js.

Rest Devices • Intern • January 2014 in Boston, MA

Worked extensively on node.js server for a smart baby monitor. Implemented firmware updates for monitor, internal dashboard of connected devices, and live streaming of audio from monitor to iPhone app.

Google • Sophomore Engineering Practicum Intern • Summer through Winter 2013 in Cambridge, MA

Developed web tools that provide a user-friendly interface for creating, viewing, and abstracting XML queries to a flight search engine, for both internal and external usage.

Continued into the Fall as a part-time developer. Used machine learning techniques to cluster custom XML flight search queries for analytics purposes. Maintained and updated suite of existing tools.

Massachusetts Institute of Technology • Lab Assistant for 6.005 • Spring 2013 at MIT

Held office hours for a software development class taught in Java. Material covered included design patterns, testing, user interfaces, and concurrency. Graded homework and exams. Supervised and performed code review.

ID Tech Camps • Instructor • *Summer 2012 in Fairfield, CT*

Taught 5 week-long introductory programming courses in Java to students ages 12-17, 8 students per week. Covered fundamentals, object-oriented programming, and graphics (swing and 2D).

Massachusetts Institute of Technology • Lab Assistant for 6.01 • *Spring 2012 at MIT*

Guided students through Python and electronics labs in Introduction to EECS. Tested labs for correctness and clarity. Labs used a combination of python, circuit simulation, and physical circuit creation through breadboarding to program robots.

Vecna Technologies • Intern • *January 2012 in Cambridge, MA*

Designed and prototyped an interface to create boolean logic for branching survey transitions.

PROJECTS

Data Center Virtual Machine Placement System Design • Group Project • *Spring 2014*

Designed (but did not implement) a system for placing virtual machines in a changing and unknown data center network in order to reduce cost and application completion time.

Smart Folder System Design • Individual Project • *Spring 2014*

Designed (but did not implement) a UNIX operating system extension to provide Smart Folder functionality through virtual directories of symbolic links.

RNA Folding Algorithm • Partner Project • *Fall 2013*

Designed and implemented a technique to improve the theoretical runtime of an existing dynamic programming solution to computing RNA secondary structure. Co-authored research paper and gave formal presentation.

Live Collaborative Text Editor • Group Project • *December 2013*

Designed and implemented the UI for a Google Docs-like editor; debugged and documented group code (Java).

CPU Simulator • Individual Project • *Fall 2012*

Simulated a processor in its entirety: started with logic gates and ended with ability to execute assembly code (JSim).

ABC Music Player • Group Project • *November 2012*

Designed and implemented the Abstract Syntax Tree for representing and playing a piece of music (Java).

'Blob' and Sudoku Puzzle Solvers • Group Programming Competitions • *Spring 2011, Spring 2010*

Led a group of six to design and implement efficient puzzle solvers for a statewide competition (Java).

Crocheted the Lorenz Manifold • Independent Study in Differential Equations • *Fall 2010*

<http://www.math.auckland.ac.nz/~hinke/crochet/othermans.html> (tenth down from the top).

ACTIVITIES

Next Act • Cast Member • *Spring 2013 at MIT*

Performed in an entirely student-run musical production of *Elton John and Tim Rice's Aida*.

Study Abroad • *January 2013 in Madrid, Spain*

Took intensive Spanish II in Madrid, stayed with a host family and experienced Spanish language and culture.

MIT Undergraduate Practice Opportunities Program (UPOP) • *Fall 2012 - Spring 2013 at MIT*

Participated in a professional development and engineering leadership program for MIT sophomores that focused on leadership, communication, critical thinking, and decision making in a workplace environment.

Volunteer with the MIT Admissions Office • Fall 2012 at MIT

Showed prospective students what the daily life of an MIT student is like by bringing them to classes and lunch. Gave advice about the college admission process.

Secular Society of MIT • Fall 2012 at MIT

Attended weekly discussion meetings about big questions in philosophy and the impact of religion on society.

MENTORING

Campus Preview Weekend • Host • April 2014 at MIT

Hosted a prospective MIT student for four days. Provided advice about choosing a college.

Blueprint Hackathon • Mentor • February 2014 in Cambridge, MA

Assisted high school students with web programming in day-long hackathon organized by MIT and hosted at Google. Gave advice on strategy and taught introductory HTML, CSS, and Javascript.

Introduce A Girl To Engineering • Volunteer • February 2014 at the Boston Public Library

Ran a booth that taught the light spectrum through glow-in-the-dark bubbles. Event introduced elementary and middle school girls to the possibility of a career in STEM.

MIT Residence Exploration • Volunteer • August 2013 at MIT

Throughout MIT's weeklong-orientation, acted as a mentor to new freshmen in Simmons Hall. Made pancakes for many hungry freshmen every morning. Organized making vegan food available at every event with food.