Rebecca E. Weinberger

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EDUCATION

Massachusetts Institute of Technology
Cambridge, MA
SEPT. 2015 - JUNE 2019

Major in Computer Science, Minor in Music
GPA: 4.6/5.0
Selected coursework: Systems Engineering, Advanced Data Structures, Design and Analysis of Algorithms, Elements of Software Construction, User Interface Design, Machine Learning, Artificial Intelligence, Mathematics for Computer Science, Computation Structures, Fundamentals of Programming
Projected coursework: Performance Engineering of Software Systems

Hathaway Brown School
Shaker Heights, OH
SEPT. 2011 - JUNE 2015

High School
4.3 weighted GPA (4.0 scale). National Merit Semifinalist, Cleveland Technical Societies Council scholarship recipient. Test Scores: 36 ACT, 2380 SAT, 800 SAT II in Math 2 & French, 780 SAT II in Chemistry

TECHNICAL EXPERIENCE

MongoDB
MAY 2018 - AUG 2018
New York, NY

Software Engineering Intern
- Implemented new features and fixes across the MongoDB Node.js Driver
- Features included a deprecation library, a custom Karma.js/ Rollup.js framework to test libraries client-side, and a visualization of application performance information to facilitate insight into the driver's performance.

MIT CSAIL
FEB 2018 - MAY 2018
Cambridge, MA

Undergraduate Researcher
- Researched Progressive Web Apps (PWAs) with the Haystack group
- Worked on converting the existing Confer web app to a PWA via client-side JavaScript service workers

CRI Labs
JUNE 2017 - AUG 2017
Paris, France

Intern
- Created a prototype for an efficient, low-cost, open-source beehive monitor
- Device consists of a wireless Adafruit sensor kit, which forwards the data via Arduino microcontrollers to a Node web platform to be displayed in real time

MIT Web Dev Competition
JAN 2017

First Place Winner, Casual Division
- Built a Node web app to simplify and centralize the process of trading products within the MIT community.
- The app is a login-secured buy/sell platform that integrates a MongoDB database and includes searching and messaging features

MIT Media Lab
MAY 2016 - MAY 2017
Cambridge, MA

Undergraduate Researcher
- Worked with the Opera of the Future group, building web & Android apps to upload and geotag sounds for the lab's City Symphonies project
- Implemented a granular synthesis engine in SuperCollider dependent on MIDI keyboard and audio file input

Alpha Chi Omega Fraternity
DEC 2015 - PRESENT

Webmaster and House Manager
- Implemented and deployed two Django websites from scratch for MIT's AXO chapter
- The internal site's functionality is geared at keeping track of chapter attendance and elections data
- Schedule and oversee maintenance and repairs for our historic chapter house in Boston

ACTIVITIES & PROJECTS

Academic Projects
- **TechConnect**: For 6.033 (Systems Engineering), designed a system to analyze data collected from various smart devices placed around MIT's campus. A culminating paper detailed design decisions such as network topology, routing, communication protocol, and main server design. Provided an evaluation detailing tradeoffs, various use cases, failure handling, performance, resource usage, and limitations.
- **Iacono's Working Set Structure**: Final group project for 6.851 (Advanced Data Structures) involved an implementation of the data structure in JavaScript as well as an interactive browser visualization and analysis of the structure's performance against other common data structures.

Teaching Experience
- **Lab Assistant**: Assisted in 6.009 (Fundamentals of Programming). Responsibilities included completing the weekly programming labs assigned to students, providing lab feedback to the instructors, staffing office hours, and giving lab checkoffs to students to check their understanding.
- **CodeIt!**: Mentored for Code It!, a weekly MIT outreach program geared at introducing middle school girls to programming.

Music
- **Built a violin**: Pursued an independent project of building a violin from scratch, mentored by an amateur luthier and funded by Hathaway Brown. Documented the process in a short video with 80k+ views on YouTube.
- **Solo, Orchestral, and Chamber Violinist**: Violin lessons since age 2. Ensembles include: Cleveland Orchestra Youth Orchestra for 3 years (Assistant Concertmaster), Hathaway Brown orchestra for 8 years (Co-Concertmaster), MIT Symphony Orchestra, MIT Chamber Music Society

SKILLS & INTERESTS

- Languages and Technologies: Python, JavaScript, Java, Arduino, HTML/CSS, Node, Django, React, Redux, Express, MongoDB, Handlebars, Mocha, Chai, Sinon, Karma, Rollup, Git, LaTeX, SuperCollider, MAX/MSP, Adobe Photoshop
- Proficient in French, basic knowledge of Japanese