

# SARAH WALTERS

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## EDUCATION

### Franklin W. Olin College of Engineering • Needham, MA

May 2017

Candidate for Bachelor of Science in Engineering with Computing (GPA 3.92)

Relevant courses: Programming Languages, Computer Graphics, Foundations of Computer Science, Computer Architecture, Discrete Mathematics, Data Science, User Oriented Collaborative Design, Teaching and Learning in Undergraduate Science and Engineering

## EXPERIENCE

### Google: Software Engineer • San Francisco, CA

July 2017 -

### Microsoft: Software Development Intern • Redmond, WA

May - August 2016

Wrote and maintained full-stack software (C#, Swift) for the Outlook Groups iOS app.

- Built an end-to-end pipeline for social activity notifications within groups.
- Implemented infrastructure to store and serve group last activity time; modified the client home screen to display recent activity first.
- Requested access to the issue backlog and fixed over 10 bugs and crashes.

### Onshape: Research & Development Intern • Cambridge, MA

June - August 2015

Wrote and maintained client-side software (Angular, Backbone, d3) for Onshape's full-cloud 3D CAD web application.

- Redesigned the version control interface to allow users to view change lists between major versions.
- Built a Protractor testing framework for a major component of the application.
- Implemented five smaller features and fixed over 30 bugs in the client-side backlog.

### Systems and Technology Research: Software Development Intern • Woburn, MA

May - August 2014

- Designed and implemented a data visualization web application for a DARPA contract.
- Evaluated and improved upon an experimental classification algorithm implemented using scikit-learn.

### Olin College: Lead Instructor for Olin.js • Needham, MA

September 2015 - May 2016

Led a team of peers to design and teach a project-based course on modern web application development. The course familiarized students with Node.js as a web server framework and ES5 JavaScript as a responsive client-side language through four weeks of introductory instruction, three weeks of partner labs, and a six-week team project.

### Olin College: Course Assistant • Needham, MA

September 2014 - May 2017

Responsibilities include holding office hours, tutoring students individually, and assessing student work.

- Fundamentals of Computer Science Spring 2017
- Data Structures & Algorithms Spring 2017
- Discrete Mathematics Fall 2016
- Teaching and Learning in Undergraduate Science and Engineering Fall 2016
- Software Design Fall 2015
- Olin.js Spring 2015
- Modeling and Simulation of the Physical World Fall 2014

## PROJECTS AND RESEARCH

### Capstone Project in Engineering: Fidelity Labs

September 2016 - May 2017

Working with Fidelity Labs to investigate the future of bitcoin and the blockchain through user codesign and technical prototyping.

### Research on Assessment and Situational Motivation

September 2013 - May 2017

Conducting research under Professor Yevgeniya Zastavker regarding the relationship between assessment and situational motivation in engineering education. Gathering survey data and performing grounded theory analysis in order to establish a qualitative framework. Published (as first author) in IEEE Frontiers in Education 2016.

### PianoBot

October - December 2014

With a team of five, built a system which reads sheet music or a MIDI sound file and uses 36 servo-actuated fingers to play a keyboard. I wrote the Python software for sending data over serial port to an Arduino and the Arduino software for commanding the array of servos.

## PERSONAL INTERESTS

Piano (16 years): won two state competitions.

Violin (13 years): attended seven state festivals and two summer festivals; member of the Boston Philharmonic Youth Orchestra.