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: Incoming 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.