Zareen Choudhury

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Education

Massachusetts Institute of Technology, Cambridge, MA — May 2018

- Candidate for Bachelor of Science in Electrical Engineering & Computer Science — GPA: 4.9/5.0
- Courses: Computer Systems, Microcontrollers, Computer Vision, Digital Systems, Probability & Stats, Machine Learning, Software Design, Circuits, Algorithms, Computation Structures, Math for CS, Diff. Eq.

Skills

- Programming languages: Python, Java, Scala, Verilog, Objective-C, C, C#
- Other: Cassandra, Kafka, Spark, iOS development, Android development

Projects

Smart Window, Microcontrollers Lab Final Project — April 2017-May 2017

- Built a window whose transparency changes with ambient light to maintain user-specified brightness levels
- Implemented automation algorithms in C on PSoC microcontroller, and UI in HTML for Amulet touchscreen

La PC-na, Digital Systems Lab Final Project — Oct 2016-Dec 2016

- Built an interactive pool table using an FPGA in which users strike virtually displayed balls with a real cue
- Implemented algorithms in Verilog for cue tracking and speed calculation, cue collisions, and ball friction

iSight, Assistive Technology Class Project, *Computer Vision Software Developer* — Sep 2015-Dec 2015

- Developed software for portable device to enable blind individuals to interact with touchscreens
- Used OpenCV for text detection and Tesseract for text interpretation in Android application

Research & Work Experience

Yelp, *Distributed Systems Intern* — May 2017-present

- Developing a system to support Lua plugins in HAProxy/NGINX for policy routing decisions in SmartStack

Dexcom, *Server Development Intern* — June 2016-August 2016

- Developed real-time processing pipeline to handle data from continuous glucose monitoring (CGM) device
- Wrote in Scala, used Kafka and Spark for data streaming and analysis, persisted data in Cassandra

Brain Power, *Android Development Intern* — January 2016

- Developed Google Glass applications to assist autistic children with social interactions
- Used OpenCV for facial feature recognition and image manipulation in Android application

Facebook, *Software Engineering Intern* — June 2015-August 2015

- Developed real-time multi-player iOS word game in Objective-C as part of Facebook University program
- Used Parse for backend, Firebase for real-time notification, and pop for animation

MIT Center for Educational Computing Initiatives, *Undergraduate Researcher* — January 2015-June 2015

- Developed algorithms in C# to detect errors in handwritten responses to math problems

NASA Goddard Space Flight Center, *Software Development Intern* — January 2015

- Implemented new GUI features in Core Flight Software (cFS) using Python and QT toolkit
- Wrote HTML parsers to automate the addition of 75 new ground commands to cFS

Activities

Gordon-MIT Engineering Leadership Program — September 2016-June 2017

- Actively developed leadership & teamwork skills in leadership training program for engineering contexts

TechX, *HackMIT Team & Blueprint Team* — September 2014-May 2016

- Organized HackMIT, MIT's premier, 1000-person hackathon, and Blueprint, a high school hackathon