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: 4.8/5.0
- Courses: Operating Systems, Machine Learning, Computer Systems, Microcontrollers, Computer Vision, Digital Systems, Probability & Stats, Software Design, Circuits, Algorithms, Computation Structures

Skills

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

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

Distributed Robotics Lab - MIT CSAIL, *Undergraduate Researcher*   September 2017-present
- Developing Canopy, a cloud robotics platform for robot message transmission & cloud computing

Yelp, *Distributed Systems Intern*   May 2017-August 2017
- Developed 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

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 & Honors

- **Angle Undergraduate Research & Innovation Scholar** (2017-18): selected for SuperUROP research program
- **IEEE Eta Kappa Nu** (2017-18): inductee into EECS Honors Society
- **Undergraduate Teaching Assistant** (2017-18): for 6.004 Computation Structures
- **Other**: Gordon Engineering Leadership Program, TechX/HackMIT, Society of Women Engineers, SAGE