Isaac Davis

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Education

Brown University – Bachelor of Science, Computer Science   Providence, RI – May 2018
- GPA: 4.0 in-major, 3.75 overall
- Relevant courses: *Operating Systems, Computer Systems/Architecture, Algorithms/Data Structures, Design/Implementation of Programming Languages, Object-Oriented Programming, Logic for Software Abstraction, User Interfaces/User Experience, Discrete Mathematics*

Technical Experience

Analog Devices, Inc. – Software Engineering Intern   Chelmsford, MA – June 2016-August 2016
Debug Solutions Team – Maintains emulators, simulators, and associated development tools for Analog's full range of processors
- Integrated previously separate power-on self-test programs for the ADSP-SC573 processor's ARM and SHARC cores into one unified program to simplify and automate production testing process
- Fixed Coverity defects, compiler warnings, and bugs as part of the 2.4.0 release of Analog's end-user Eclipse-based IDE
- Wrote a command-line application for viewing and editing a processor's memory values while a debug session is in progress, in order to demonstrate the feasibility of such a feature to a commercial customer
- Gained experience with Agile methods and tools

Weenix: A Unix-like Operating System   Brown University, Providence, RI – February 2016-May 2016
Implemented a Unix-like operating system in C for CS169 ("Operating Systems Laboratory") at Brown University
- Wrote process/thread constructs, scheduler, terminal line discipline, disk driver, virtual file system, on-disk file system, and virtual memory/userland address space management
- Weenix is able to run any Unix executable in ELF format written with a limited subset of the C standard library

Your Heaven, LLC – Programmer/Studio Assistant   Providence, RI – December 2014-August 2015
Audio engineering company designing high-quality acoustic instrument microphones and signal processing software
- Debugged codebase of patented embedded-software drum amplification system, written in C
- Began porting drum system from TI to XMOS architecture; began implementing Ethernet AVB/TCP functionality
- Met with XMOS sales directors and engineers to discuss product needs, capabilities, and compatibility issues

Shelfie – Front-end Android Programmer   Warwick, RI – May 2015-August 2015
Early-stage social media startup building a photo-sharing application for the consumer market
- Implemented GUI components for taking, viewing, uploading photos, viewing user profiles, and searching for users
- Wrote utility classes for interfacing with PostgreSQL database through HTTP/JSON for content retrieval

Teaching/Mentorship Experience

Brown University – Teaching Assistant   Providence, RI – May 2015-May 2016
"Algorithms and Data Structures" (CS16), 200-student second-semester computer science course   *Spring 2016*
- Implemented automated, anonymized grading/testing system in Python for ongoing use by course staff
- Held office hours, graded assignments, ran conference sections, mentored individual students

"Object-Oriented Programming" (CS15), 350-student introductory computer science course   *Fall 2015*
- Ported Tetris and Pac-Man projects from Swing to JavaFX as part of course transition between graphics libraries
- Wrote extensive guide to JavaFX graphics library; will be used by students in subsequent years
- Coded new reference implementation of Pac-Man final project; will be used by course staff in subsequent years

IntraCity Geeks – Teaching Assistant   Providence, RI – May 2015-August 2015
City of Providence-funded organization focused on increasing technology education in under-served communities
- Staffed "Code Night With the Mayor," a monthly event where adults learn web-oriented programming technologies
- Oversaw/explained programming assignments in middle school HTML/CSS/JavaScript classes

Technical Skills

- Programming languages: Most experience: C, Python, Java   Some familiarity: x86 Assembly, C++, HTML/JavaScript
- Software: Bash, Make, GDB, Git, Subversion, JUnit, Eclipse, Visual Studio, Android Studio/SDK, Alloy Analyzer, LaTeX
- Platforms: Linux/Unix, Windows

Additional Skills/Interests

- Jazz drumming (Brown Jazz Band, RI All-State Jazz Band), audio recording/mixing/editing