Adin Horovitz

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Education

2016 **MS, Computer Engineering - GPA 3.9**
Boston University - Boston, MA

- Introduction to Embedded Systems
- Computer Architecture
- Introduction to Logic Design
- VLSI Digital Circuit Design
- Applied Algorithms for Engineers
- Advanced Data Structures
- High Performance Computing
- Cybersecurity

2008 **BA, Chemistry/Neuroscience - GPA 3.6**
Knox College - Galesburg, IL

Software Skills (Decreasing Order)

Languages C, C++, Java, MATLAB, R, Python, C#, HTML, CSS, MIPS/x86 Assembly, SQL, LaTeX

General Linux Kernel Module, Qt UI, Web Design (Visual Studio), GPU (CUDA), Arduino, Android App Dev (Android Studio), Agile Project Management, Multicore (OpenMP/Pthreads), Shell scripting, QEMU, Verilog, Cadence Virtuoso, gdb, Git, IDA Pro

Professional Experience

Feb 2014 - Jul 2014
Walden University School of Nursing
Field Education Temp

- Application process automation using R

Oct 2012 - Aug 2013
Kaplan Test Preparation
MCAT Instructor/Tutor

Aug 2009 - Aug 2012
Lab of Neuropsychology, NIMH
Animal Biologist

- Exploratory data analysis using MATLAB
- Design/execute behavioral experiments
- Present findings in PowerPoint and poster formats

Selected Projects

2016
Project Lead
"bitQuit" – IoT Smoking Abatement Tool
The bitQuit is a smart cigarette case (and Android app) that helps smokers limit and track cigarette use. The case locks for a programmable interval, and custom switches count cigarettes remaining. These data are transmitted via BLE to the app, where smoking history and remaining wait time are viewable.

2016
Front-End, Firmware Developer
"Display-o-Matic" e-Paper Tie
This novelty tie has a built-in e-paper screen which displays arbitrary patterns/images. The user selects image thumbnail on touchscreen linked to Gumstix Verdex board. Selection is conveyed via Bluetooth to Raspberry Pi, which updates display via GPIO pins.

2016
CUDA Developer
High Performance FFT
Using a naive FFT as a baseline, high-performance methods (code motion, loop unrolling, OpenMP) were applied in various combinations to achieve a range of speedup. Also wrote a CUDA implementation to utilize GPU parallelism.

2015
Back-End Developer
"JAMs" Playlist Application
This Java-based playlist app maintains a database of playlists/songs based on popularity. Searches feature fast autocomplete using a Prefix Tree, and popularity ranking is maintained with a modified BST. UI implemented with JavaFX.

2015
Researcher
C Vulnerability Static Analysis Tool
Inspired by usr/bin/rsh vulnerability allowing addition of user to sudoers, this tool batch scans source code for privilege escalation risks. Python web scraper was used to download OS X source code in bulk.

2014
Lead Developer
"LEAP Legends" – Android App
Original hexagon-based game for Android. Board elements and game pieces are implemented with OOP principles to create a simple, yet deep two-player strategy experience.