Peter Borenstein

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Work Experience

Jan 2016 - May 2018

Hardware Engineer at Critical Alert Systems, Jacksonville, FL

Designed, developed, and coded hospital signalling equipment

The system conveys calls triggered by patients to nurses. I created a new hub, a screen device to display calls, replaced chime chips with an audio circuit for new alarms, and created firmware for vandal proof room devices. For an Ethernet device close to release, I made minor firmware changes and created a python script to place MAC addresses into the binary programming file and print a label. Used TI-RTOS.

Organized and pre-tested equipment for UL 1069 certification. Testing included 8kV ESD zaps, impact testing, flame testing, 100,000 button presses, etc.

Performed audio testing with a foam padded box and sound dB meter.

Tested power supplies at max load with dummy resistors to verify safe temperature rise.

Tested Ethernet and RS485 circuits at max cable length.

Aug 2013 - Jan 2016

Co-Founder and Hardware Lead at Verigo, Gainesville, FL

Designed, developed, debugged, and coded a low power wireless data logger

The devices use Bluetooth Low Energy to communicate logged temperature and humidity data to smartphones & tablets. Passed FCC and CE certifications. Managed two part time engineers brought on after our seed funding round.

Raspberry Pi, Python scripts, and the BlueZ stack were used to create automated test equipment for manufacturing. The end of line tester programmed flash memory, verified power consumption, verified the radio with a connection, took a temperature sample, sect calibration values and date, and recorded the programmed MAC address.

Created python test script to simulate dropped Bluetooth connections.

Performed environmental testing to verify humidity and temperature ranges.

Turned pF capacitance on quartz crystal PCB traces to verify correct radio frequency and time keeping.

Created test firmware to simulate full logs to test memory and accelerated radio activity to test battery life.

May 2011 - May 2011

Test Technology Intern at Intel, Fort Collins, CO

Simulated pre-Silicon Verilog

Created test patterns for Broadwell server chips pre-Silicon. Modeled scan chains allowing others to run tests. Used Perl to read though lengthy test logs for relevant data.

Jun 2010 - Nov 2010

Lifeguard at University of Florida Housing Dept., Gainesville FL

Stood watch

Provided a safe swimming experience for others.

Education

December 2013

Bachelor of Science in Electrical Engineering, **University of Florida**
Major: Electrical Engineering | *Magna Cum Laude* | Digital Design Specialization
GPA: 3.66/4.0

Skills

Top Skills	C and Git
Basic Knowledge	Python, C++, Perl, Linux system programming, Bash, VHDL
IDEs Used	IAR Workbench, Code Composer Studio, Atmel Studio
PCB CAD Used	Eagle, PCB Artist, Altera
Tools Used	Oscilloscopes, Logic Analyzers, Multimeters, SMU
Barr Training	Attended embedded software boot camp. Only person to finish the final project.
Agile and Scrum	Used Jira and TFS to optimize meaningful labor
TI E2E MVP	I was recognized for sharing expertise, solutions, and experience to help other community members

UF IEEE Student Chapter Involvement

2011-2012 Academic Year	Secretary (elected)
2010-2011 Academic Year	Advertising Chair
2011	1st place IEEE South East Conference Engineering Ethics Competition
Various Dates	Introduced local grade students to robotics with Lego Mindstorm