ROBERT CLIFTON BUCHANAN

(262) 309-7616
cliff451@gmail.com
S43 W36844 Laak Lane / Dousman, WI 53118

EDUCATION

University of Wisconsin – Madison, May 2015
Computer Engineering, Computer Science, Math
Bachelor of Engineering, 3.23/4.00

Selected School Projects (and Technologies Used)

- ANTLR-based compiler for a C-like language (Java, ANTLR)
- Pipelined Verilog impementation of RISC processor with simple assembler (Verilog, Python)
- Best performing global router in Digital Design Automation class (C++)
- Senior design: game implemented with custom PCB and microcontroller (C, FreeRTOS)

WORK EXPERIENCE

WiRover Inc (January – May 2014), Madison WI
Student Software Consultant (part-time)

- Python service to manage consumer cellular cards in embedded Linux environment
- Tricky network configuration to redirect traffic to remote proxy service

MapR (June – Aug 2014), San Jose CA
Software Engineering Intern

- Implemented collection of database statistics to improve query optimization
- Created d3/Javascript interface to examine execution statistics for distributed query
- Resolved issues on community-driven open-source project (Apache Drill)

Extreme Engineering Solutions (Jan – Aug 2013), Middleton WI
Associate Embedded Engineer

- Authored, ported, and debugged power-on self-tests in a UEFI test framework
- Debugged customer-driven support issues related to BIOS/OS hand-off
- Extended and maintained test automation suite for automated product testing
- Analyzed and automated analysis of nightly reliability testing

PROGRAMMING LANGUAGES

Java: Hadoop ecosystem development, **Python**: automation and data analysis, **C/C++**: embedded and POSIX development, **Javascript/jQuery**: front-end web development, **HTML/CSS/Bootstrap**: web interface design, **Bash**: automation and text processing, **Matlab**: numeric programming.

COMPUTER SYSTEMS

Linux: development and non-professional system administration, **UEFI**: debugging and development, **VxWorks (x86)**: boot-related assembly, **Embedded ARM**: development with assembly and FreeRTOS

DIGITAL DESIGN

Verilog (Modelsim and Icarus): standard-cell designs, **Quartus II**: FPGA designs

OTHER COMPUTER SKILLS

(LA)TEX: technical typesetting, **Excel**: data analysis, **Inkscape/Gimp**: graphics processing