ROBERT CLIFTON BUCHANAN

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EDUCATION

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

WORK EXPERIENCE

Caterpillar Inc. (October 2016 –), Mossville IL
Associate Engineer (contract employee of EASi LLC)
- Ported legacy telematics code from IBM Rhapsody to custom state machine framework
- Devopled code and unit tests in Agile team environment using C++14 and GTest
- Automated testing of J1939 device discovery
- Debugging issues in multi-threaded embedded linux system

WiRover Inc (January – May 2015), 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

COMPUTER SYSTEMS

Linux: basic embedded kernel debugging and everyday use, **UEFI**: debugging and development, **Embedded ARM**: development with assembly and FreeRTOS.

PROGRAMMING LANGUAGES AND TOOLS

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

DIGITAL DESIGN

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

OTHER COMPUTER SKILLS

Vector CANoe: J1939 traffic monitoring, **(LA)TEX**: technical typesetting, **Excel**: data analysis, **Inkscape/Gimp**: graphics processing.