Luis A. Marquez

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SUMMARY OF QUALIFICATIONS

- Accomplished software engineer with track record of successful embedded software development.
- Proven ability to take designs from concept to production including requirements definition, debugging, verification, and maintenance.
- Strong knowledge of software development in C/C++. Expert in microprocessor based firmware development for hardware control in real-time, embedded environments.
- Analytical thinker that consistently solves problems, and brainstorms new ideas to ensure successful project outcomes.

PROFESSIONAL EXPERIENCE

Dover Flexo Electronics Rochester, NH

Embedded Software Engineer November 2011-March 2015

- Wrote the software for the EasyWeb digital controller in C using an embedded RTOS designed to automate a variety of industrial tension control applications. Also designed the analog and digital hardware on a custom board.
- Upgraded the SteadyWeb5's communications and GUI software in C/C++ to add features such as Modbus, USB, and RS232/485 communication.
- Wrote complex control algorithms in C/C++ for closed loop PID controllers and drivers for graphical LCD displays.
- Developed a Java desktop application to upload and download controller data to a PC using a USB 2.0 connection.

PERSONAL PROJECTS

- SpectrumScan is a homebrew 2GHz Spectrum Analyzer built on a Beaglebone single-board computer using a USB RTL-SDR(Software Defined Radio) receiver to capture and display the radio frequencies all around us. The software is written in C++ and uses a 7.0" touchscreen display for the GUI built using the Qt framework. Development was done on an Ubuntu x86 machine and cross-compiled for the ARM beaglebone target running debian linux. The project is hosted on github and released under the GPL v.3 License. For demo and sources visit the SpectrumScan page on my website, http://luismbedder.com/SpectrumScan
- More projects on my github repo, github.com/luismbedder

TECHNICAL EXPERIENCE

Programming Languages	C, C++, Java, CSS, HTML, and LabVIEW.
Software Tools	Eclipse,Visual Studio, Android Studio, Git, Qt, Keil uVision, MPLAB, OrCAD
Board Level Hardware	ARM-Cortex processor, PIC microcontrollers. Experienced with I2C, SPI, UART, USB. Sensor and external memory interfacing, LCD and LED displays.
Target Operating Systems	Linux(Ubuntu, Debian), FreeRTOS, Windows. Currently learning Android.

EDUCATION

New Mexico Institute of Mining & Technology Socorro, NM

Bachelor of Science, Electrical Engineering May-2011