

# Jaime Rodriguez

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I am a dynamic professional with a strong work ethic, pursuing my degree in Electrical Engineering. A few attributes that describe me include great analytical abilities, with a clear understanding of the Hardware Development Process. A quick learner with excellent problem solving skills, I have the ability to work accurately and pay attention to detail.

## Education

### Portland State University,

Bachelor of Science in **Electrical Engineering**

Graduation: **Winter 2015**

Class Level: **Senior**

GPA: **3.2**

### Relevant Coursework:

Digital Systems Series (I, II), Electric Circuit Analysis Series (I, II, & III), Electromagnetics Series (I, II), Electronics Series (I, II), Microprocessors, Signals Processing and theory, Engineering Computation, Engineering Programming (C, MATLAB), and Technical Writing.

## Engineering Projects

### Serial To USB Layout

Summer Internship

- The purpose of this project was to take an existing product and redesign the circuit and PCB to communicate using a standard USB connection instead of the current serial connection.
- This was achieved using signal converting ICs, and a simple circuit to create a working prototype.
- The prototype was then used to redesign the products schematic and PCB.

### Real Time Spectrogram

Winter Quarter 2014

- Designed a real time spectrogram to visually analyze signals at certain bandwidth
- The data acquisition tool used, the Labjack was connected and communicated to the host computer with use of Matlab, which we used to create a simple to use guided user interface.
- Exceeded project expectations by: incorporating may user selectable features (time, frequency and sample rate).

### Audio Equalizer

Spring Quarter 2013

- Designed and built an audio equalizer using standard components
- Equalizer consisted of three stages: filter stage, summing stage, and amplification stage
- Low pass, high pass, and band-pass filters were used to control bass, treble, and midrange
- Equalizer was extensively tested and tuned to eliminate noise
- Exceeded project expectations by: creating refined prototype with soldered connections with portable cased speaker.

### Sensor guided Servo

Spring Quarter 2012

- Designed a servo with a gear and photodiode attached that was capable of following a light source.
- The project was done in visual C, using a host computer to control servo.
- To exceed project expectations this was turned into a game, having a character on screen avoid falling debris being controlled by the light source.

### Wheel of Fortune

Winter Quarter 2011

- Created interactive Wheel of Fortune game by interfacing a Lab Jack with MATLAB
- Designed program using a modular approach which made testing and delegation of tasks easier
- Exceeded project expectations by creating actual spinning wheel that program interacted with.

## Technical Skills

**Computer Programming Languages:** C, Matlab, and Assembly.

**Hardware Description Languages:** Verilog.

**Circuit CAD tools:** LTSpice, ModelSim, PADS, EAGLE.

**Operating Systems:** Windows 7, Linux/Unix, and OS.

**Laboratory Measuring Equipment:** Environmental Chambers, DVMs, Oscilloscopes, Logic Analyzer, and Spectrogram Analyzer.

**Personal:** SMT soldering, bilingual fluent Spanish.

## Experience

### Hardware Engineer – Supra. Salem, OR.

- Created and executed test plans and procedures to validate products (hardware, firmware and software).
- Executed test procedures and debug proof of concepts or early engineering units.
- Ensure the execution of testing and test plans are completed with the highest level of quality.
- Provided critical analysis and test result summaries.
- Documented performance data and use statistical data analysis techniques to summarize results.
- Participated in test strategy discussions, developing test methodologies, plans & test cases to ensure system performance metrics meet product specifications.

## References

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