

# Eric Sorensen

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360.909.0751

**OBJECTIVE:** Intern position in the area of hardware/software design.

## EDUCATION:

B.S. Electrical Engineering, (graduation June 2010)  
Portland State University, Portland, OR

Current GPA:4.00/4.00

Major courses at Portland State:      Microprocessors, Feedback and control,  
Solid state physics.

Currently enrolled in:                      Electronics, Electromagnetics, Microprocessor Interfacing  
and Embedded Systems.

Projected Spring Classes:                  Technical Writing, Electronics II, Electromagnetics II.

## SKILLS:

- Software and Programming Languages: Able to write with Visual Basic, C/C++, PHP, Java and Assembly.
- Hardware: Can design schematics and route circuit boards using Cadsoft Eagle. Very comfortable testing with oscilloscopes and multimeters.
- Software: Experienced using both C and assembly to program microcontrollers. Designed multiple websites based on large MySQL databases.
- Other: Extensive work with PIC microcontrollers will help when learning new architectures.

## MAJOR PROJECTS:

Inverted Pendulum using a PID controller – Digital Logic Project

An individual project to design a controller to stabilize an inherently unstable inverted pendulum. Project required the design of an H-bridge utilizing mosfets, a low pass Bessel filter to smooth out feedback, a power supply, and a digital PID controller based on a PIC microcontroller.

Stepper Motor Controller – Project for Logitech Inc.

Developed a stepper motor controller to be used in test fixtures for the audio division of Logitech. Designed product using an LCD/rotary encoder interface so that the user can adjust speed, rotation and acceleration. This project involved extensive use of timers and interrupts.

High Speed Flash/Camera controller – Personal Project

Designed a controller to sync two cameras and four flashes to capture high speed images.

Developed a menu interface to allow a user to calibrate a sensor used to trigger the device.

Involved the use of an A/D converter, SCRs to trigger the flashes, and a software-debounced button.

**WORK EXPERIENCE:**

Starbucks Coffee Company  
Shift Supervisor  
Vancouver, WA

April 2005-October 2008

Logitech Audio Division  
Individual Design Project  
Vancouver, WA

November 2008

**REFERENCES:**

Douglas Hall  
503.725.5396  
Electrical and Computer Engineering  
Post Office Box 751  
Portland, Oregon 97207

Microprocessors Professor

Alicia Zier  
360.431.3979  
808 Ocean Beach Hwy  
Longview, WA 98632

Manager at Starbucks from 2005-2007

Diana Thomas  
360.514.0154  
8809 NE 84<sup>th</sup> St.  
Vancouver, WA 98662

Manager at Starbucks in 2008