Kaden Strand

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Colorado State University Coursework

Anticipated Graduation Date: May 2016

Education Summary: Senior studying in the Honors Program at Colorado State University, pursuing dual degrees in Computer Engineering and Computer Science, completed Mathematics minor; GPA: 3.87

Select Completed Coursework:

Electrical & Computer Engineering
- CS/ECE 561 - Design of Embedded Systems (*graduate)*
- ECE 451 - Digital System Design
- ECE 452 - Computer Organization and Architecture
- ECE 331 - Electronics Principles
- ECE 251 - Intro to Microprocessors

Computer Science & Math
- CS 320 - Algorithms -Theory & Practice
- CS 370 - Operating Systems
- CS 253 - Problem Solving with C++
- Math 369 - Linear Algebra
- Math 317 - Advanced Calculus (Real Analysis)

Work Experience

StoreVirtual Test Intern – HP Enterprise *6/8/2015 to 8/14/2015*
As a Test Intern on the HP StoreVirtual Test team, I engineered and conducted initial implementation of a new factory reset process for the next generation of StoreVirtual hyper-converged systems. In addition, I rapidly learned a particular build process and functioned as interim lead engineer for that process.

Software Engineer Intern – Bounce Software *10/18/2013 to 8/22/2014*
Bounce Software is a small custom software solutions company consisting of fewer than ten people. As a member of the Bounce team I worked on all aspects of product development. I met with clients, created mock-ups of potential products, designed features, wrote production code, and researched new software methods. Most of our work was in designing web based applications using the Google Web Toolkit (GWT) Java API libraries.

Software Engineer Intern – Ricoh *5/20/2013 to 8/16/2013*
As a Software Engineer Intern for Ricoh, I worked on two projects in Ricoh's testing automation lab. The first was a web app designed to transfer command line functionality to a visual interface. I wrote both the server-side and client-side code for the project. The second was a controller program to increase automation and efficiency of test distribution across all of the lab computers. These projects gave me experience with Linux, Python, multiprocessing, socket handling, distributed systems, and programming in a professional environment.

Major Projects

EcoCar3 Advanced Vehicle Technology Competition – Senior Design Project (Controls Team)
For my senior design project, I am currently working with a cross-disciplinary team of ECE students and mechanical engineering students to develop the controls system for the EcoCar3 competition. CSU is among 16 universities competing to develop the best performing and most environmentally friendly hybrid electric vehicle possible. Our team is using MATLAB and Simulink to develop algorithms to control hybrid drivetrains and integrate our work into a 2016 Chevrolet Camaro donated by GM.

Project Wolf Eye – Year-Long Design Project
As part of an ECE senior design team, I worked with Wolf Robotics to create and implement an efficient, repeatable, and automated method to accurately calibrate a robotic arm in three dimensional space using a laser distance sensor. I worked directly on an ABB six-axis robotic arm at Wolf, using the RAPID programming language. Wolf Robotics plans to use our team's calibration method in industrial welding applications to improve the process of detecting weld features.

Voice-Enabled System for Power Allocation (VESPA) – Semester Project ECE 561 (Embedded Systems)
The VESPA system allows home wall sockets to be naturally controlled by voice, without any dependency on mobile devices, radio technology, or the internet. By utilizing a Raspberry Pi computer to interpret voice commands relayed by a modified AC wall intercom system, each device plugged into the VESPA wall sockets can be powered on or off from any other connected device simply by speaking.

Programming Languages & Technical Skills

- Java
- Python
- C, C++
- Assembly (MIPS, FreeScale 68HC12)
- RAPID (ABB Robotics)
- Verilog HDL
- SystemC
- MATLAB / Simulink
- Bash & PowerShell
- HTML/CSS
- MySQL