Nicholas Kelly

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Objective

To advance my education in Computer Engineering so that I can contribute to the field of Computer Architecture.

Education

Jan 2014 - Present

University of Texas at Austin | Austin, TX
M.S. in Computer Architecture and Embedded Systems - Spring 2016

Sept 2009 - Jun 2013

Oregon State University | Corvallis, OR
B.S. in Electrical/Computer Engineering (GPA 3.91) - Spring 2013

- Member of Tau Beta Pi and Eta Kappa Nu (President) honors societies

Experience

Jul 2014 - Present

Post-Silicon Validation Intern
Intel | Austin, TX

Jun 2013 - Dec 2013

Electrical Engineering Intern
NACCO Materials Handling Group, Inc. | Fairview, OR

- Embedded Development (ARM, ONFI Flash, SPI/I2C/UART, CANBus, WiFi)
- PCB Design, Layout, and Assembly
- .NET development (Windows, ASP.NET, C, SQL, CSS, Javascript)

Oct 2012 - Jun 2013

Web Developer, EECS Research Project
Oregon State University | Corvallis, OR

- Facebook application development
- Data visualization and web interface (Javascript, Java servlets)

Apr 2012 - Sept 2012

Software Development Intern
Mentor Graphics | Wilsonville, OR

- Perl, Tcl/tk, and shell scripting, C/C++ development
- GUI (Tcl/tk) and CGI (Perl) development

Jun 2011 - Jun 2013

Student Web Developer
OSU Libraries | Corvallis, OR

- Development of content (forms, pages, modules) using Drupal/PHP/Javascript
- Page design using HTML/CSS
- General routine tasks and maintenance work on pages

Sept 2010 - Jun 2011

TA/Grader for ECE 272 (Digital Logic) and CS 195/295 (Web authoring)
Oregon State University | Corvallis, OR

- Management of specified ECE 272 lab (Verilog) including assisting students
- Grading projects and helping during office hours and/or on discussion forum
- Creation and maintenance of content for the class websites (XHTML, PHP, CSS, Javascript)

Qualifications

Web/Programming

Experience in web development, including Javascript/jQuery/AJAX/Node.js, C#, ASP.Net, CSS/SASS, HTML5, PHP, Perl (CGI), JSP/Servlets, SQL, MongoDB, and Actionscript (2.0/3.0)

Experience working with Java, C/C++, Tcl, Perl, and Python

Experience with GUI development in GTK+, Qt, and Tcl/tk

Electrical

Experience with embedded assembly/C development for PIC, AVR, MSP430, and ARM

Experience in VLSI design (Verilog/SystemVerilog, ModelSim, Cadence, Place-and-route)

Experience with circuit simulation (HSPICE, Spectre, LTSpice)

Experience with circuit layout for PCBs (Eagle) and silicon (Cadence)

Coursework in embedded systems, computer architecture, and analog/digital circuits

Knowledge of electrical parts, processes, and troubleshooting

Additional

Experience working individually and in teams/groups

Communication and support skills

Able to learn new material quickly

Selected Projects

Jan 2014 - Present

Computer Architecture and Embedded

- Development of computer architecture (school-specific ISA) simulator(s) in C, with testing suite(s) in Python
- Development of SDF scheduling genetic algorithm to optimize towards energy usage
- Development of custom RTOS for TI Launchpad (ARM)

Jan 2013 - Jun 2013

VLSI Design and Simulation Projects

- Simulation of power-gating and near-threshold effects on power and delay for XOR gate
- Designed bike POV circuit using SystemVerilog, ModelSim, and Cadence Encounter (Place-and-route)

Sept 2012 - May 2013

Sole Topography Energy-harvesting Piezoelectric Shoe (STEPS)

- Development of Cross-platform (C++/Qt) application for processesing and displaying sensor data
- Worked with MSP430FR and piezo transducers to create a energy-efficient, self powered system

Publications

- Meier, R.; Kelly, N.; Almog, O.; Chiang, P., "A Piezoelectric Energy-Harvesting Shoe System for Podiatric Sensing" Engineering in Medicine and Biology Society (EMBC), 2014 36th Annual International Conference of the IEEE , vol.x, no.x, pp.x August 2014.

References available on request