Nicholas Kelly

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Objective

To advance my education and experience 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 (3.9 GPA) - Spring 2016

Sept 2009 - Jun 2013

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

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

Experience

Jan 2015 - Present

Graduate Research Assistant
UT Austin | Austin, TX

- Error injection and simulation (reliability)

Jul 2014 - Jan 2015

Post-Silicon Validation Intern
Intel | Austin, TX

- Validation for emulator debug tools

Jun 2013 - Dec 2013

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

- Embedded Development (C/C++, 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

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, Tcl/tk, and iPhone (Objective-C)

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 (UT)

- An analysis of 3DIC Kogge-stone Adders
- Auto-Multithreading extension for Node.js and V8
- GPU Power virus (genetic algorithm, code generator)
- Development of computer architecture (school-specific ISA) simulator(s) in C, with testing suite(s) in Python
- SDF scheduling genetic algorithm to optimize towards energy usage
- Development of custom RTOS for TI Launchpad (ARM)

Sept 2012 - Jun 2013

VLSI/Analog Design and Simulation Projects (OSU)

- 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)
- Design, simulation (HSPICE/Spectre), and layout (Cadence) of OTAs for different specifications

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 , pp.622,625,26-30 August 2014.

References available on request