Shuo Li (Eric)

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Objective: To obtain an entry level application developer/software engineer/hardware engineer full-time position in 2015

Education

University of Illinois at Urbana-Champaign Urbana, IL
Master of Science in **Electrical and Computer Engineering** (GPA 3.35/4.00) Expected May 2015

University of Illinois at Urbana-Champaign Urbana, IL
Bachelor of Science with **Honors** in **Electrical Engineering** (GPA 3.58/4.00) May 2013

Notable Coursework

VLSI System Design	Systems on Chip (SoC) Design	Theory and Fabrication of Integrated Circuits
Real-Time Systems	Digital Systems Laboratory	Web Applications (Stanford)
Database Systems	Art and Science of Web Programming	Data Structures and Programming Principles

Projects Experience

Microprocessor Design and Layout (AMD Am2901 250nm): VLSI System Design Fall 2012

- Designed, implemented, simulated, and laid out a 16-bit microprocessor datapath with Cadence Virtuoso
- Programmed the controller module in Verilog, synthesized it to a layout, and then integrated it with the datapath
- Wrote test benches in Verilog to perform functional verification for each module with NC-Verilog simulator
- Optimized the logic design, floorplanning, and signal routing to minimize the area of microprocessor layout
- Performed physical verification for each layout in terms of DRC and LVS with Cadence

Truncation Spurs Free Direct Digital Synthesizer (DDS) Design on FPGA (master research thesis project) Fall 2014

- Designed and Implemented DDS with traditional structure and DDS with spurs-free structure in Verilog HDL
- Simulated the DDS modules in ModelSim and investigated the sources of spurs in output
- Programmed the DDS designs on FPGA and generated the analog signal by adding DAC and LPF to FPGA output
- Analyzed the outputs with spectrum analyzer to prove the spurs elimination of the DDS with spurs-free structure

Improved Version of UIUC Online Course Registration System (database systems project) Fall 2013

- Analyzed client requirements, specified system functionalities to implement, identified integrity constraints in the system, and proposed a schedule that guided the progress of the whole project
- Identified data and the data types involved in the system; designed the conceptual database (E-R diagrams)
- Normalized database schemas to 3NF, which reduced redundancies in the database
- Wrote a parser with Python scripts to read and extract raw data from UIUC course website; documented data into XML files, then populated the MySQL database; wrote PHP scripts to query MySQL database
- Designed and beautified the user interface and webpage with HTML5, CSS and JavaScript

Android Application Development for Remote iRobot (Roomba) Control (real-time systems project) Fall 2013

- Programmed an iRobot control commands prototype with Python
- Developed an android application with Java on a mobile phone to control the robot remotely
- Operated multiple iRobot control commands via Twitter and realized voice control iRobot with android application

Technical Skills

- **Programming Language:** C++, Python, Verilog
- **Web Programming:** HTML5/CSS, JavaScript/jQuery, SQL, PHP, XML
- **Tools:** Cadence, Quartus II, ModelSim, MySQL, Eclipse, GitHub
- **Platforms:** Mac OS X, Linux, Windows
- **Language:** Mandarin Chinese (Native), English (Full Professional Proficiency)