Charles Guan

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Education

M.S. Electrical Engineering — Expected June 2016
B.S. Electrical Engineering — Expected December 2015
Stanford University — GPA: 3.90

University of Oxford — Visiting Student, April 2014 - June 2014

Coursework

Operating Systems and Systems Programming
Digital Systems: Logic and Processor Design
Statistical Signal Processing
Convex Optimization
RF Analog Communications Design Laboratory
Analog Integrated Circuits Design
Electromechanical systems
Control Design

Technical Skills

Programming: C, Python, C++, MATLAB, Arduino
Hardware: Verilog HDL, SPICE, Circuit Prototyping, Oscilloscope, Solder

Projects

Implemented Multithreading, User Programs, Virtual Memory, and File Systems on a minimal OS (C)
MRI Image Reconstruction Using Compressed Sensing and Parallel Coil Data (MATLAB)
Music Player (Verilog), Microprocessor on FPGA (Verilog)
24.5MHz Analog Radio Transmitter and Receiver (SPICE, LNAs, VCOs, PLLs, and Filter Design)

Experience

Embedded Software Engineer Intern and KPCB Fellow - Square. San Francisco (Summer 2015)

- Wrote drivers in C to interface with RTOS, which will ship with Square's upcoming reader
- Designed state machines and wrote corresponding firmware for I2C communication
- Participated in Agile development with sprint planning, peer code reviews, and continuous testing using CMake, Git, Stash, Jenkins, and hardware test racks

Business Development - BASES Entrepreneurship Club. Stanford, California (Oct 2013 - May 2015)

- Managed relationships with sponsors such as Samsung, Silicon Valley Bank, and Lightspeed
- Led team of sponsorship executives to cultivate relationships with each sponsor

Algorithm Research Intern - CDOI. Hong Kong (Summer 2014)

- Developed machine learning algorithms and simulation platforms in Python and R
- Created market simulator API to compare different trading strategy impacts and feedback
- Derived and tested online linear regression method

Research Assistant - Oxford Centre for fMRI. Oxford, England (Apr 2014 - Jun 2014)

- Coded and tested fMRI image and video reconstruction algorithms in MATLAB
- Used compressed sensing techniques to increase spatiotemporal resolution

Software Engineer Intern - Intel. Hillsboro, Oregon (Summer 2013)

- As part of Architecture and Engineering Analysis Labs, developed software for global customers
- Programmed in Python and C# to create one-click automated validation

Honors

2015 KPCB Engineering Fellow
2013 Stanford ACM Hackathon, 3rd Place Team (Piclet)
2012 USA Mathematical Olympiad Participant
2012 Siemens Competition in Math, Science, and Technology Semifinalist Award
2011 Eagle Scout Award

Activities

Rock Climbing, Resident Assistant