



Andrew X. Wu

Graduate of Carnegie Mellon University
B.S. Electrical and Computer Engineering (Cumulative GPA: 3.3/4.0)
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TECHNICAL PROJECT & WORK EXPERIENCE

RFID Coil Construction and Characterization

Analog Circuits Project, Fall 2013

- Constructed and tuned a scanner coil to power a bit tag using near-field principles
- Created a simple tag proximity sensor using a scanner antenna and captured the modulated signal of a commercial 64-bit tag. Added additional circuitry to demodulate and filter the modulated signal of the 64-bit tag
- Used an Arduino program to detect the presence of the bit tag and to decode and validate the 64-bit data stream from a commercial tag

Telepresence ChessBot

Cognitive Video Project, Spring/Summer 2014

- Created a telepresence chess system with a natural human interface using KinectSDK and computer vision algorithms to operate in real time
- Developed main piece detection algorithm by segmenting Kinect color and depth data
- Worked on Arduino code to transmit a player's move to a robot arm which would execute the move on a physical chessboard
- Helped optimize trade-off between change in compute time and probability of positive detection in piece detection algorithm

Wireless Camera Charger

Wireless Systems Project, Fall 2014

- Created a wireless charging system for a digital camera which can be attached to the bottom of a digital camera with its existing tripod thread
- Implemented an inductive coupling system with transmitter and receiver to generate and transfer power
- Sourced and assembled hardware components from various manufacturers to select frequency and amplify voltage
- Optimized resonant circuits to maximize power efficiency under cost and dimensional constraints

Teaching Assistant

Computing at Carnegie Mellon, Fall 2012 to Fall 2014

- Created presentations and lectures to lead a weekly recitation
- Monitored student progress online and send out support emails/comments
- Performed standard administrative duties and grade logging
- Set up new computers including installation of operating systems and other software programs

EDUCATION

Carnegie Mellon University, Pittsburgh PA (Class of 2015)

Bachelor of Science in Electrical and Computer Engineering

Fall 2011 to Spring 2015

Cumulative GPA: 3.3/4.0

Iolani School, Honolulu HI (Class of 2011)

Cumulative GPA: 3.98/4.00

Relevant Coursework: Fundamentals of Electromagnetics, Analog Circuits and Electronic Devices, Structure and Design of Digital Systems, Applied Electrodynamics, Cognitive Video, Intro to Computer Systems, Signals and Systems, RF Circuits and Antennas for Wireless Systems

SKILLS

- Software: Electronic Workbench (Function Generator, Oscilloscope, etc.), C, MATLAB, Python, PHP, Mathematica, LaTeX, Maple, KinectSDK, HTML, CSS, JavaScript, MySQL
- Hardware: Vector Network Analyzer, Spectrum Analyzer, SystemVerilog
- Operating Systems: Linux/Unix, Windows

MEMBERSHIPS AND AWARDS

- Member of Institute of Electrical and Electronics Engineers (IEEE)
- Member of Eta Kappa Nu, CMU ECE Honor Society (Fall 2013-Spring 2015)