Christopher Chen

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EDUCATION

University of Illinois at Urbana-Champaign Aug 2014 – May 2018

- B.S. in Electrical Engineering and Engineering Physics GPA 3.41/4.0
- Relevant Courses
    - Electrical Engineering: Analog Signal Processing, Electronic Circuits, Semiconductor Devices, Fields and Waves, Computer Systems and Programming (ECE385)
    - Engineering Physics: Classical Mechanics, Quantum Mechanics, Electromagnetic Fields, Special Relativity

INTERESTS

- Circuit Design, Analysis, and Testing
- Software Development
- Solid State/Condensed Matter Physics, Semiconductor Devices
- Hardware/Software Interfacing

WORK AND RESEARCH EXPERIENCES

Carnegie Institution of Washington, HPCAT at APS, ANL – Intern Summer 2015

- Researched and determined the plausibility of externally using induction heating to heat diamond anvil cells.
- Built a working low power (200 watt) prototype to demonstrate the capabilities of inductive heating
- Generated a high frequency alternating signal from a DC signal with the use of switching MOSFETs through a liquid cooled wound copper tube tank circuit, capable of heating an iron screwdriver to ~1000deg C.

University of Chicago at Argonne National Lab – Software Engineering Intern Summer 2014/2015, Winter 2015

- Developed a script to systematically archive process variables in the EPICS channel access system using Python and SQL databases.
- Implemented the use of a JavaScript plotting framework, Flot, to visualize the archived data in a specific time frame.

University of Chicago, James Franck Institute – Research Assistant Summer 2014

- Used, tested, and helped modify Ivo Peters' Particle Image Velocimetry python program to assist research students in the analysis of viscoelastic properties of monolayers of nanoparticles and phospholipids.
- Developed separate analysis software in Java to provide statistical usage, geographic, and demographic data from a spreadsheet of laboratory users and conducted experiments.

University of Chicago at Argonne National Lab – Software Engineering Intern Summer 2012/2013

- Took over the development of a web interface to store and maintain inventory of devices registered to a network.
- Utilized MySQL to store and PHP to view the manually entered specifications of each device.
- Applied an automated system to track changes and provide feedback on the addition of new entries and modification of existing entries.

SKILLS

- Comfortable – C, Java, Python, HTML/CSS, PHP, Microsoft Office, Windows, OSX, Linux
- Familiar – C++, Arduino, Javascript, Verilog, PSpice, Allegro
- Operating Systems: Windows, OSX, Linux
- Electronic lab tool usage for hardware debugging and modification
    - Oscilloscope, multimeter, function generator, soldering tools, heat gun

ACTIVITIES

- Volunteer at HackIllinois 2015 and 2016
- Attended HackMIT 2014, BostonHacks 2015