Ian Chang

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Undergraduate junior looking to develop my career in computer science and engineering as an intern at a leading high-tech company

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Education

UNIVERSITY OF CALIFORNIA, BERKELEY, 2018-2021 | GPA: 3.74 / 4.0
BS in Electrical Engineering and Computer Sciences
Courses: Data Structures, Structure and Interpretation of Computer Programs (Programming Paradigms), Designing Information Devices & Systems I (Linear Circuits, Linear Algebra), Designing Information Devices & Systems II (Non-linear Circuits, Robotics & Controls, Interpolation)

SANTA MONICA COLLEGE, 2015-2018 | GPA: 4.0 / 4.0
Entry Level Programmer Certificate (High School Dual Enrollment)
Courses: C Programming, Internet Programming, Visual Basic Programming, Intro to Computer Science

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Honors

UC Berkeley Bowles' Hall Honor Roll
Crawford Memorial Mathematics Scholarship
USA Computing Olympiad Platinum
USA Computing Olympiad Gold Perfect Scorer
Santa Monica High School Salutatorian (Class of 700)

Employment

Bitcoin Presenter, Santa Monica Public Library. April 2018

- Arranged and founded the "Introduction to Bitcoin" library program, teaching over 35 citizens on the technical workings of Bitcoin technology.
- Sold-out library event, averaging 4 out of 5 star reviews.

Research

Research Assistant, NanoCAD Lab, UCLA. September 2016-June 2018

- Developed Verilog parser using Python to re-arrange FPGA I/O chip hierarchies using tree data structures and depth first-search algorithms. Replaced manual rearrangement of I/O blocks with instantaneous, automated block rearrangement to expedite FPGA code design process.
- Architected Verilog block hierarchies and unit-tested results with Xilinx ISE Design Suite.
- Implemented a Mac OS X port for an open-source memory benchmarking tool (X-Mem) using C++, POSIX, and Mach thread libraries. Increased users of X-Mem in utilized courses by 30% (previously only Windows & Linux supported)
- Integrated Clang compiler support and SCons compatibility for X-Mem Mac OS X developers using Python, expanding compiler compatibility to Mac OS X systems.
- Designed real-time data visualization website for X-Mem that uploads and parses X-Mem CSV results using MySQL, PHP, Plotly.js, and Bootstrap CSS. Created a system where users can share and compare their memory benchmarking results online, replacing the old-fashioned and inefficient method of physical file transfer and loading the CSV results in a spreadsheet program.

Teaching

Teaching Assistant, Los Angeles Computing Circle, UCLA. 40 hours. July 2016-August 2016

- Mentored and outreached to high school students in college-level material including fast and efficient algorithms, graph theory, and mobile-development as part of a UCLA EE Department hosted program.

Volunteering

Programming Volunteer, Santa Monica Public Library, Santa Monica, CA. Sept 2017 – October 2017

- Collaboratively developed a video game using PyGame that was publicly featured and played by library visitors during International Failure Day.

Projects

Coinlet — Bitcoin/Ethereum/Litecoin Price Tracker

- Developed RESTful Android application to track cryptocurrencies prices in real-time using Android Studio, Retrofit Library, and Coinbase API.

Robotic Motor Car

- Built a motorized car utilizing an MSP430 microcontroller, encoders, frequency-response filters, and open-loop model to drive multiple directions/angles.

Scheme Interpreter

- Built a Scheme interpreter that implemented Read-Evaluation-Print-Loop schematic and tail-recursion optimization using Python.

Languages

Java, Scheme (Functional Programming), Python, SQL, Verilog, C, Bash

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Skills

Git, Vim, Tmux, IntelliJ IDE (Debugger), JUnit (Unit Testing), Soldering, Circuit Design and Implementation

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