Abraham Gonzalez

Email: abe.gonzalez@berkeley.edu
Websites: abejgonzalez.github.io — linkedin.com/in/abraham-j-gonzalez/

Education

***Ph.D.* — Electrical Engineering and Computer Science** Aug. 2018
University of California, Berkeley

***Bachelors of Science* — Electrical Engineering** May 2018
The University of Texas at Austin
GPA - Overall 3.98/4.00 Major 3.98/4.00

Relevant Coursework

Computer Architecture, Digital Systems Design Using HDL, Embedded Systems Design Lab, Real-time Operating Systems, Algorithms, Digital Logic Design, Honors Eng. Design I & II, Software Design I & II, Electric Circuits Lab, Solid State Electronic Devices, Electromagnetic Eng., Eng. Communication, Circuit Theory, Intro to Probability

Experience

Scalable Performance CPU Development Group Intern May 2018 - Aug. 2018
Intel — Austin, TX

- Worked on debugging tools for microcontroller integration team.
- Helped setup infrastructure between firmware team and microcontroller integration team to speed up work.

Microsystems Technology Lab Intern Jun. 2017 - Aug. 2017
Massachusetts Institute of Technology — Cambridge, MA

- Researched variations in electroplating growth in redistribution layers under the supervision of Dr. Boning.
- Designed various neural networks and machine learning models for electroplating growth using Tensorflow.
- Presented final research poster summarizing work and participated in multiple MITSRP workshops.

QCA Research Assistant May 2015 - Aug. 2016
The University of Texas at Austin — Austin, TX

- Researched and designed Quantum Cellular Automata (QCA) circuitry with Dr. Swartzlander.
- Optimized QCA implementations of the Carry-Lookahead and Conditional Sum adder through QCA Designer.
- Reported back to Dr. Swartzlander on results and improvements to QCA circuit designs and layouts.

Office Shared Graphics Explore Intern May 2016 - Aug. 2016
Microsoft — Redmond, WA

- Created and added new features within the Office Ink suite using C++.
- Created physical network of Arduino microcontrollers for OneWeek Hack-a-thon that once connected to each other sent a unique code to main server (HTTP requests).

UIM Driver Intern May 2015 - Aug. 2015
Qualcomm — San Diego, CA

- Designed software framework for smartcard interaction in C++/CLI and C++.
- Integrated framework into .NET application managing smartcards via CCID by utilizing APDU transmission and logging; file system viewing; file data parsing and manipulation; and smartcard reader management.

Research Presentations

Engineering Science Symposium Poster Session Nov. 3, 2017
Society of Hispanic Professional Engineers National Conference — Kansas City, MO

- Research Presented: A Machine Learning Approach to Modeling Electroplating Process Variations in IC Redistribution Layers
- Awarded 2nd Place in Engineering Science Symposium Poster Competition

MITSRP Poster Session Aug. 10, 2017
Massachusetts Institute of Technology — Cambridge, MA

- Research Presented: A Machine Learning Approach to Modeling Electroplating Process Variations in IC Redistribution Layers

Skills

Experience with C/C++/C#/CLI, Android Java, Python, TensorFlow, Verilog/VHDL, Git, LC-3/ARM Assembly
Experience with Tiva Launchpad, Arduino, SparkFun, and Particle Core microcontrollers

Professional Leadership and Membership

Vice President (Spr. 2018), and Corresponding Secretary (Fall 2017) of HKN Honor Society
Member of HKN Honor Society (Spr. 2016-Now)
Academic Director (Fall 2016-Fall 2017), and member (Fall 2014-Now) of Society of Hispanic Professional Engineers

Accomplishments

Berkeley Fellowship (Fall 2018), EECS Excellence Award (Fall 2018), GEM Fellowship (Spr. 2018),
Highest Honors (Spr. 2017), Distinguished College Scholar (Spr. 2017/2018), College Scholar (Spr. 2016),
R. Rocca (Fall 2017), V. L. Hand Endowed (Fall 2016), and Texas Instruments Diversity Scholarship (Fall 2015)