Lillian Chin

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Education

Massachusetts Institute of Technology (MIT) **June 2017**
B.S. in Electrical Engineering & Computer Science, Minor in Mechanical Engineering, GPA:4.8/5.0 *Cambridge, MA*
Coursework: *Power Electronics, Manufacturing and Design II, Mechanics and Materials I, Microcontroller Project Laboratory*

Work and Research Experience

Square **June – Aug. 2015**
Electrical Engineering Intern *San Francisco, CA*

- Wrote C code for NFC card proximity detection that interfaced with 2 microcontrollers, an FPGA, ADC/DACs, and a voltage regulator. Key part of firmware needed to pass contactless payment certification
- Tuned NFC antennas with VNA and SMT rework skills, enabling proposal of new antenna design directions
- Wrote Python script to send HCI commands to Bluetooth chip, validating results with spectrum analyzer
- Supported EVT build of 300 units in China with electrical engineeirng, embedded software and translation skills for SMT and FATP factory lines
- Provided foundation for algorithm to automatically design tamper mesh in Altium
- Created preliminary schematics and PCB layout for new NFC board in Altium

Massachusetts Institute of Technology, Department of Mechanical Engineering **Feb. 2014 – May 2015**
Researcher with Dr. John Hart *Cambridge, MA*

- Created machine vision algorithms in C++ for dynamic photolithography system, increasing speed of tracking, detection and encapsulation by 300% with multithreading, Kalman filters and bit plane splicing.
- Performed encapsulation experiments on liver hepatocytes in photopolymers for tissue engineering applications.
- Adapted photolithographic system to a robot arm, enabling accurate micropatterning on macro-scale objects. Improved scanning system's accuracy and designed mechanical enclosures for electronic / optical systems.
- Analyzed performance of various particle detection and tracking algorithms in simulated and actual conditions.

MIT Media Lab, Biomechatronics Group **Jan. – May 2015**
Researcher with Dr. Hugh Herr *Cambridge, MA*

- Created thin-wire electrodes and Matlab script to stimulate rat sciatic nerve and measure response
- Wrote automated particle analysis in ImageJ to measure and differentiate neuron size, count and g-ratio to quantify nerve regrowth

Georgia Institute of Technology, Department of Mechanical Engineering **May 2011 – Aug. 2013**
Researcher with Dr. Michael Leamy *Atlanta, GA*

- Constructed an agent-based model in NetLogo to study collective cell movement during wound healing.
- Innovatively applied engineering principles to create model based on biological time-lapse videos of wound healing.

Other Experience

6.002 - Circuits and Electronics *Lab Assistant* Sept. 2015–Present
MIT Computer Science and Artifical Intelligence Laboratory, Big Data Initiative Sept. – Dec. 2014
Coursera *Software Engineering Intern* June – Aug. 2014
Emory University, Department of Pharmacology Aug. 2011 – May 2013
Westminster Schools, Department of Mathematics Jan. 2010 – May 2013

Honors and Awards

Kleiner Perkins Caulfield Byers (KPCB) Engineering Fellow **June – Aug. 2014**
One of 50 students selected nationally for a fellowship to develop technical skills & connect with entrepeneurial leaders.

Winner of MakeMIT Hackathon **Jan. 2014**
Awarded first place for creating prototype of guitar-playing robot in 14 hours including strumming and fretting mechanism.

Intel Science Talent Search Finalist **Jan. – Mar. 2013**
One of forty finalists recognized in national science research competition for original research in bioengineering.

Skills and Activities

Laboratory – Machine shop experience, CNC mill, CNC lathe, surface mount soldering rework experience
Languages – *Fluent:* Python, Java, C/C++ *Familiar:* Matlab, Bash, Chinese
Proficiencies – Git, Adobe Photoshop, Adobe Illustrator, EAGLE, Altium, MasterCAM, Solidworks
Clubs – Tech Squares, MIT Sporting Clays Association, Assassin's Guild