Lauren Hu

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EDUCATION

Harvey Mudd College (HMC)
Bachelor of Science, Engineering — Expected Graduation: December **2018**

Courses: Microprocessor-based Systems (E155) | Eng. Electronics & Lab (E151) | Eng. Clinic (E113) Advanced Rocketry (E190AJ) | Radio Frequency Circuit Design (E190AK) | Experimental Eng. (E80) Advanced Systems Eng. (E102) | Digital Electronics & Computer Eng. (E85) | Continuum Mechanics (E83) Electronic & Magnetic Circuits/Devices (E84) | Materials Eng. (E86) | Autonomous Vehicles (E11)

Honors: Harvey Mudd For Inspiration & Recognition of Science & Technology (FIRST) Scholarship (4 years)

SKILLS

Languages & Software: Matlab | System Verilog | Mathematica | Python | Arduino | C | Git | Linux Windows | Mac OSX | HTML | SolidWorks | ModelSim | PCB design | Altium | PADS | KiCad | LTspice
Tools: Lathe | CNC Mill | Wood Shop Tools | Metal Shop Tools | Soldering | Oscilloscope

PROJECTS

Wireless pH Sensor – HMC George Fischer Signet Clinic — HMC | In Progress
- Designing a mixed signal embedded system for industrial pH sensor networks in a team of 5
- Signal conditioning, wireless communication & power transfer, board level hardware design, firmware development

Ukucorn – MicroPs Final Project (E155) — HMC | Fall 2017
- Created a ukulele teacher with chord recognition and interactive fretboard LEDs in a team of 2
- LEDs embedded in the fretboard display a target chord, only changing after the correct chord is played
- SPI, frequency analysis, piezo sensor, analog filtering, ADC, FPGA, Raspberry Pi 3, and ukulele

Aerocube Payload – HMC Aerospace Clinic — HMC | Spring 2017
- Worked on an Aerospace picosatellite payload utilizing the NVIDIA Jetson TX1 SOM
- Joined the team of 4 for the second half of the project

Sleep Dep Buddy – Mudd Hacks 2016: A Hardware Hackathon — HMC | Fall 2016
- Made an animated blob on a 128x128 screen react to environmental changes using an Arduino, Pixel display, IMU, Phototransistor, LEDs, and laser-cut shell
- 2nd place finish by a team of 4

Pterodactyl Rocket – Engineering course (E80) — HMC | Spring 2016
- Modified an Aerotech Arreaux rocket for data collection in a team of 4
- Designed and populated a PCB to collect altitude, pressure, temperature, rotation, light, and humidity data

Rick Roll with an ESP8266 – Campus prank — HMC | Fall 2016
- Controlled a tiny speaker to *Rick Roll* people remotely via wifi on a local server

Exercise-ball-Launching Robot - FIRST Robotics Competition (FRC) — Honolulu, HI | Spring 2014
- Fabrication-captain of the Punahou School FRC Team 2090
- Finalist in Hawaii regional competition
- Taught team members how to use the machine shop, worked on design and fabrication of mechanical and electrical components, conducted robotics demonstrations for elementary and middle school STEM workshops

WORK EXPERIENCE

E85 Grader - Engineering Department — HMC | Spring 2018
- Graded problem sets and labs for students in Digital Electronics & Computer Eng.

Electrical Power Systems Intern – Millennium Space Systems — El Segundo | Summer 2017
- Worked on satellite electrical power systems
- PCB design and layout, wire harness and testing

Machine Shop Proctor - Engineering Department — HMC | Spring 2016 - Present
- Taught and supervised students in the machine shop

CS Summer Staff - Computer Science Department — HMC | Summer 2015
- Worked with Gentoo Linux as a system administrator
- Performed miscellaneous tasks including securely wiping hard drives and setting up CS clinic spaces

Founder- Relativistic Rhino Jewelry Shop — Honolulu & HMC | 2007 - Present
- Design, make, and sell jewelry at craft fairs and available online at: *www.etsy.com/shop/relativisticrhinos*