# Victoria Moran

vmoran@hmc.edu | (858)204-0327 | 11947 Dapple Way, San Diego, CA 92128
vickimoran.github.io

## EDUCATION

**Harvey Mudd College** – Claremont, CA — Expected May 2020
Bachelor of Science in Engineering — GPA: 3.81/4.00
Tau Beta Pi, Dean's List (all semesters) — Major GPA: 3.89/4.00

***Electrical Engineering Coursework*** – Power Electronics | Electronic and Magnetic Devices and Circuits | Control Systems | Microprocessor Systems | Digital Electronics and Computer Engineering | Experimental Engineering

***Other Related Coursework*** – Advanced Systems Engineering | Intro to Engineering Design and Manufacturing | Data Structures and Program Development | Electromagnetic Theory and Optics | Multivariable Calculus

## SKILLS

| | |
|---|---|
| ***EE*** | Circuit Design \| PCB Layout (Altium) and Verification \| Embedded Systems \| FPGA \| Raspberry Pi |
| ***Programming*** | Matlab \| C++ \| C \| SystemVerilog \| Java \| Python \| Linux \| Git \| R \| Arduino \| Verilog-A \| HSPICE |
| ***Languages*** | English \| Mandarin (Intermediate) \| Spanish (Beginner) |
| ***Other*** | CAD (SolidWorks) \| Machining \| Modeling \| Rapid Prototyping \| Innovation (patent pending) \| Microsoft Office \| Technical Writing \| New Product Development \| Lab Equipment |

## INDUSTRY EXPERIENCE

**Square** | Electrical Engineering Intern — June - August 2019
- Performed system validation on a secure payments board to ensure functionality and signal integrity
- Designed a breakout board for internal debugging through schematic capture and PCB layout of debug interfaces
- Investigated changes to system behavior from using a new connector and modified schematics accordingly

**HP** | R&D Systems Engineer Intern — May - August 2018
- Developed a new technology to reduce the time of curing various inks on textiles from 3 minutes to <1 second
- Collaborated with an international team to meet product development timelines and protect intellectual property

**Energize Colleges** | Sustainability Intern — *City of Rancho Cucamonga* | January 2018 - May 2018
- Analyzed emissions data to create a baseline greenhouse gas inventory for Rancho Cucamonga Municipal Operations

## RESEARCH EXPERIENCE

**Analog Circuit Engineering Lab** | Undergraduate Researcher — *HMC* | January 2018 - present
- Model and simulate phase change memory arrays to determine how selector diode quantity limits array size

**Internet Security Lab** | Undergraduate Researcher — *University of Nebraska-Lincoln* | June - August 2017
- Developed a public key exchange protocol to manage and distribute keys on the Interplanetary Overlay Network

## PROJECTS

**Toyota Motor Fuel Cell Clinic** — *HMC* | Fall 2018
- Optimized power configuration of fuel cell stack and battery for chosen mid-sized North American vehicles

**MIDI Pattern Visualizer** — *HMC* | Fall 2018
- Implemented a system that plays and displays a sequence of notes recorded from a MIDI keyboard
- Raspberry Pi sends notes over SPI to FPGA which stores the pattern in shift registers and interfaces to an LED matrix

**Autonomous Underwater Vehicle** — *HMC* | Spring 2018
- Built a robot that navigates underwater using acoustic control to follow a beacon and measure properties of the water

**Vehicular Child Safety Device** — *HMC* | Fall 2017
- Developed a notification system using sensors in a car seat and a driver's seat to alert parents who leave children in cars

## ACTIVITIES

**Digital Electronics Lab Proctor** - Assist students with labs to ensure concept understanding — *HMC* | Aug 2018 - present

**Machine Shop Proctor** - Supervise and guide students with machine use — *HMC* | Jan 2018 - present

**Wellness Peer** - Organize events to promote seven dimensions of wellness — *HMC* | Aug 2017 - present

**Dorm Mentor** - Serve as peer advisor for first-year students — *HMC Division of Student Affairs* | Aug 2017 - Dec 2018