

# Erik Meike

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## Education

**Harvey Mudd College Class of 2021. Major: Engineering. Relevant Coursework:** Digital Electronics & Computer Architecture, Electronic and Magnetic Circuits and Devices, Materials Engineering, Experimental Engineering, Introduction to Engineering Design and Manufacturing, Data Structures and Program Development, Principles and Practice of Computer Science, Introduction to Engineering Systems

**The Nueva School Class of 2017. Relevant High School Classes:** Machine Learning, Functional Programming, Design Thinking

**Skills** Python, C++, Javascript, Java, ZFS, HTML, CSS, PHP, Android, WebGL, CUDA; **SERVER-SIDE:** Unix command line, MySQL; **SW TOOLS:** Dev Tools from Xcode to Vim with make; **EMBEDDED SYSTEMS:** AVR, Arduino, Raspberry Pi, BeagleBone Black, Propeller, CAN Bus, I2C, SPI, I-Wire, Serial; **HW TOOLS:** Schematic Capture, PCB Layout, Oscilloscope, Logic Analyzer; **FAB TOOLS:** 3D printer, Laser cutter, CNC Mill, CAD (Fusion 360, SolidWorks)

## Employment

### **JITX - SUMMER 2018**

- Intern for four person startup creating automated PCB design system
- Modified and extended generation tool to automatically create 27 new parameterized designs including power converters and processors

### **PRENAV - SUMMER 2016, 2017**

- Software development, hardware design, CAD for autonomous quadcopter monitoring startup
- Tested and recommended laser range finding systems for 3D imaging
- Designed and implemented timing critical RTOS systems
- Reported directly to CTO

### **QUICKLOGIC - SUMMER 2015**

- Designed, built, and tested location dead reckoning system built for S3 sensor hub platform for low power GPS location monitoring systems in wearables and mobile devices
- Wrote sensor fusion algorithms, and data processing on FPGA systems. Built testing and simulation suite for system
- Reported directly to CTO

### **INTUIT - SUMMER 2014**

- Lead programmer creating drag and drop website to streamline call center on-boarding process
- Reformatted data into XML, using client side javascript and then sent REST API calls to backend service
- Code is used as foundation for solution in use today saving more than \$1 million annually

## Projects

### **PROJECT MARSHMALLOW (MUDDERS ATTEMPT TO REACH SPACE...) - FALL 2018 - PRESENT**

- Head of electronics sending student-built rocket to the Karman line (the boundary between the Earth and space)

### **LEATHERBACK TURTLE MONITORING - SPRING 2015 - SPRING 2017**

*\$7000 in grants from Gordon and Betty Moore Family Foundation and Youth Activity Fund Grant from the Explorers Club*

- With one student, constructed custom design, built, tested, and manufactured sensor packages in quantity
- For deployment with the Leatherback Trust in Costa Rica
- Low power electronics with custom PCB and code

### **SKYNOSE - QUADCOPTER AIR QUALITY MEASUREMENT - FALL 2014 - SPRING 2016**

- Built sensor platform for quadcopter to create 3d model of air pollution
- Used Teensy 3.1 and many air quality sensors
- Visualized data on website with Three.js and in Google Earth with KML

## Other Recognition & Leadership

**HMC COMBAT ROBOTICS CO-PRESIDENT 2018-2019**

**FIRST PLACE OUT OF 42 TEAMS AT HMC'S MUDDHACKS 2018 HACKATHON FOR AUTOMATED LOCK PROJECT**

### **FRC ROBOTICS - FALL 2013 - SPRING 2017**

*Control and Automation award - Silicon Valley Regional Championships (SVR) (2016), Programming award - Chezy Champs (2016)*

*Quarterfinalist & alliance captain - Sacramento Regional Championship (2016), Semifinalist - SVR (2016), Entrepreneurship Award - SVR (2014)*

- Head of electronics and founder of First Robotics Competition (FRC) team Bot-Provoking, 4904 at The Nueva School
- Responsible for all control electronics on new robotic platform
- One of two key contributors to award winning CAN Bus-based control system
- Taught weekly 2.5 hour electronics class to bring team members from no experience to designing custom PCBs

**CO-FOUNDER FOR HIGH SCHOOL CLUBS:** Programming Club, FRC Team 4904, TEDx Youth Event Org Club.

**EXTRA CLASS HAM RADIO LICENSE - AI6YT - LICENSED SINCE SEPT 2008**

*Complete resume available at <https://yoerik.com/resume>*