

# Erik Meike

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## Education

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

**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**

- 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
- Programmatically parsed and validated data from Excel spreadsheet
- Reformatted data into XML, using client side javascript and then sent REST API calls to backend service
- Code is used as foundation for complete solution in use today saving millions of dollars annually

## Projects

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

- Head of electronics for student team sending 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 of inaugural 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 team members bringing many from 0 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>*