

Erik Meike

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Education

Harvey Mudd College Class of 2021 with distinction. Major: Engineering with Environmental Analysis emphasis.

Relevant Coursework: Chemical and Thermal Processes, RF Circuit design, Advanced Eng Thermodynamics, Digital Electronics & Computer Architecture, Material Science of Energy Conversion and Storage, Electronic and Magnetic Circuits and Devices, Materials Eng, Experimental Eng, Intro to Eng Design and Manufacturing, Data Structures and Program Development, Principles and Practice of Computer Science, Intro to Eng Systems

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

SKILLS Python, C++, Matlab, Mathematica, Java, Javascript, HTML, MySQL, InfluxDB, CUDA, ZFS, Unix command line; **SW TOOLS:** Dev Tools from PyCharm to Vim with make; **EMBEDDED SYSTEMS:** AVR, ARM, Arduino, Raspberry Pi, BeagleBone, 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

APPLE - AUGUST 2021 - PRESENT (FULL TIME EMPLOYMENT) SUMMER 2019, 2020 (INTERNSHIPS)

Hardware Engineer - Designed and programmed iPhone wireless power test designer platform. Played key role in designing, building and programming automated robotic iPhone wireless charging test system now used broadly to find the root cause of issues

JITX - SUMMER 2018 (INTERNSHIP)

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 (INTERNSHIP)

Software development, hardware design, CAD for autonomous quadcopter monitoring startup
Tested/recommended laser range finding systems for 3D imaging. Designed/implemented timing critical RTOS systems

QUICKLOGIC - SUMMER 2015 (INTERNSHIP)

Designed, built, and tested 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

Projects

HARVEY MUDD CLINIC PROGRAMS

Fall 2020 - Spring 2021 - Developed an autonomous navigation system for a Bobcat track loader

Spring 2019 - Air quality project to develop a novel type of sensor sensor to detect smoke particulates in an airplane cargo bay

HARVEY MUDD JTS (JOURNEY TO SPACE) ROCKETRY ELECTRONICS TEAM LEAD - FALL 2018 - SPRING 2021

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

HARVEY MUDD MAKERSPACE- FALL 2018- SPRING 2020

Co-president of student-led makerspace. Redesigned electronics lab, prepared budgets, purchases, and developed maker kits for HMC student community

HARVEY MUDD ENGINEERS WITHOUT BORDERS/HAITI SOLAR LIGHTS - FALL 2018 - SPRING 2020

Electronics lead for creating solar charged lights for rural Haitian communities without power

LEATHERBACK TURTLE MONITORING - SPRING 2015 - SPRING 2017

. With one student, constructed, designed, built, tested, and manufactured novel, low power, custom PCB sensor packages in quantity for deployment with Leatherback Trust, Costa Rica

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

Built sensor platform for quadcopter to create 3d model of air pollution custom air quality sensors and visualized data on website

Papers & Patents

K Pezeshki, C Norfleet, E Meike, et al., [A Board and Projects for an FPGA/Microcontroller-Based Embedded Systems Lab](#). GLSVLSI '20: Proceedings of the 2020 on Great Lakes Symposium on VLSI. September 2020. 561–565.

Automated Path Tracking for Power Machines, C. Norfleet, O Aleman, E Meike, et. al., US Patent Submitted 2021.

Recognition & Leadership

HMC WILLIAM P. WIESMANN CLINIC AWARD 2021 - For demonstrating the highest level of technical competency in the Clinic Program.

HMC T. LARRY NORIN MEMORIAL SCHOLARSHIP 2020 - For Radio Frequency communications engineering at the highest levels

HMC ROCKETRY CLUB PRESIDENT 2020-2021, HMC MAKERSPACE CO-PRESIDENT 2019-2020, HMC COMBAT ROBOTICS CO-PRESIDENT 2018-2019

HMC MUDDHACKS HACKATHON 2018 - FIRST PLACE OF 42 TEAMS FOR AUTOMATED LOCK PROJECT

ERC ROBOTICS TEAM BOT-PROVOKING, 4904 AT THE NUEVA SCHOOL- 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)

Founded and taught electronics class to train team members to design custom PCBs and teach in future years (program still exists today). Head of electronics responsible for electronics systems and one of two key contributors to award winning CAN Bus-based control system

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