

EDUCATION

Harvey Mudd College (HMC)

Bachelor of Science, Engineering

Expected Graduation: December 2018

Courses: Microprocessor-based Systems (E155) | Engineering Electronics & Lab (E151)
Engineering Clinic (E112) | Advanced Systems Engineering (E102) | Experimental Engineering (E80)
Digital Electronics & Computer Engineering (E85) | Electronic & Magnetic Circuits/Devices (E84)
Continuum Mechanics (E83) | Materials Engineering (E86) | Autonomous Vehicles (E11)

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

SKILLS

Languages: Matlab | System Verilog | Mathematica | Python | Arduino | C

Tools: Lathe | CNC Mill | Wood Shop Tools | Metal Shop Tools | Soldering Iron | Oscilloscope

Miscellaneous: Windows | Mac OSX | Linux | SolidWorks | Git | PCB design

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, power conversion, wireless communication & power transfer, board level hardware design, firmware development

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

- Created and 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
- Broke the sound barrier – confirmed by sound and data collected

Autonomous Robot - Engineering course (E11)

HMC | Fall 2014

- Designed, built, and programmed a small robot using an Arduino to play an autonomous game in a team of 2

Rick Roll with an ESP8266 - Campus prank

HMC | Fall 2016

- Controlled a tiny speaker remotely via wifi on a local Rick Roll server
- More can be found on my Instructables page under *SadPanda808*

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 new team members to use the machine shop, worked on design and fabrication of mechanical and electrical components, volunteered at Hawaii First Lego League (FLL) events, mentored FLL teams, conducted robotics demonstrations for elementary and middle school STEM workshops

WORK EXPERIENCE

Electrical Power Systems Intern – Millennium Space Systems

El Segundo | Summer 2017

- Worked on satellite electrical 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