Daniel Abraham

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Education

UC Berkeley - Electrical Engineering and Computer Science — GPA **3.92**
Expected **December 2021:**

Moorpark College - Electrical Engineering and Computer Science — GPA **4.0**
Completed **May 2019**

EE Courses - Signals and Systems, Analog/Digital Electronics, Convex Optimization
CS Courses - Data Structures, Discrete Math and Probability Theory, Computer Architecture

Career Interests: Robotics, Embedded Systems, Signal Processing, Machine Learning

Skills and Tools

Languages	Software	FPGA	Embedded	Other
Python	Atmel Studio	Xilinx Vivado	ATM328P/2560	MATLAB
Java	KiCad	Xilinx ISE	STM32	CVX OPT
C/C++	Keysight ADS	Chip - Spartan 6	Logic Analyzer	Linux/Bash
Assembly x86/RISC-V	Visual Studio	Chip - Atrix A7	I2C|SPI|UART	Excel

Work Experience and Research

Texas Instruments — **Santa Clara, CA**

Test Engineering – Intern — **Summer 2020**

- Using keysight ADS and a network analyzer, modeled a CAT5 ethernet cable as a passive network in order to emulate 100m and 60m CAT 5 cables with similar frequency responses of physical cables.
- All in all, the design incorporated 16 CAT5 emulated cables in a 12' X 4' area to improve testing by 2 fold.

Integrated Digital Rotary Inverted Pendulum — **Professor Kaiser - UCLA**

Student Researcher — **Summer 2020**

- Explored and documented the mathematical modeling of stepper motors in control systems. This included assembling a rotary inverted pendulum and releasing tutorials on how to understand the device.

Moorpark College — **Moorpark, CA**

Mathematics and Engineering Tutor — **2018-2019**

- Course instructor for multivariable calculus and intro to C++. Engaged with classes in order to improve average student performance.
- General math center tutor for math, physics, electrical engineering, and computer science.

Clubs and Projects

Space Technologies at Cal - Lunar Rover Prototype

- Designed control system to drive a rover prototype using a PS2 controller, an arduino, and motor drivers.

Magnetic Levitation

- Using an electro-magnet, a microcontroller, and PID, was able to successfully levitate a neodymium magnet.

Moorpark College Engineering Club - ROV Sub

- Built an underwater robot that can navigate and livestream footage wirelessly.

VGA Signal Processing

- Used an ATRIX A7 FPGA to generate signals to make animations on a monitor using a VGA cable.