

Hardik Mittal

U.S. Citizen

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Phone: (858)-405-9533

Residence: San Diego, CA 92126

Education

University of California, Los Angeles

Bachelor of Science in Electrical Engineering

September 2014 – June 2018

Cumulative GPA: 3.3

Mira Mesa High School

High School Diploma

September 2010- June 2014

GPA: 4.77

Skills

- Experience with Altium/PCB design, Logisim, soldering, LTspice, Visual Studio, DAQ systems, Capstone, schematic design and EE test equipment
- Proficient in C++, C, Matlab, Microsoft Excel, Word, Outlook, and PowerPoint

Coursework

- Circuits: Circuits Laboratory, Circuit Theory, Analog Electronic Circuits (Spring 2017)
- Semiconductors: Semiconductor Physics, Principles of Semiconductor Device Design (Winter 2017)
- Communication: Signals and Systems, Digital Signal Processing, Communication Systems (Spring 2017)
- Programming: Data Abstraction and Problem Solving with C++
- Miscellaneous: Engineering Electromagnetics, Logic Design of Digital Systems, Probability, Photonics (Winter 2017)

Technical Experience

Howard Hughes Medical Institute (HHMI)

Hardware Engineering Researcher in The Ozcan Research Group

Los Angeles, CA

October 2016- Present

- Use of Altium in designing the optimal schematic and PCB of a submersible, lens-free digital holographic microscope capable of imaging microorganisms, particularly *K. brevis*, present in a sample of water with a high resolution
- Acquiring hands-on experience with the Inter-integrated Circuit Protocol (I²C) by using it as a tool to control multiple sensors through the computer
- Writing weekly technical reports on the functionality of the system and the progress achieved by the Hardware Team (consisting of 2 other members)

UCLA ELFIN CubeSat Project

Systems Engineer

Los Angeles, CA

October 2016- January 2017

- Determining the root cause of improper functioning amidst device malfunctions in order to effectively integrating the team's engineering disciplines
- Performing tests on the avionics board using electrical engineering equipment, such as an oscilloscope, in order to ensure an impeccable design for the CubeSat whose purpose is to determine whether EMIC scattering is the main loss mechanism for radiation belt "killer electrons"

AIAA Rocket Project

Electrical Engineer

Los Angeles, CA

March 2016- June 2016

- Designed (using LTspice), built, soldered, and tested a relay switch circuit, which will be used for the ignition of the rocket
- Mechanical efforts involved power drilling and the use of epoxy to allow for signal transmission through a box

SimInsights Inc.

Engineering Research Intern

Irvine, CA

September 2015- March 2016

- Determined the feasibility of developing an application that serves as a remote controller for all radio-controlled vehicles in the market by conducting research on transmitters, receivers, and radio frequency signals
- Incorporated knowledge of electrical and software engineering concepts to recognize that the electrical capabilities of the Arduino had to be transferred to a software application for this product to be marketable

Unaffiliated Projects

Lie Detector

Lead Designer, Builder, and Tester

Los Angeles, CA

November 2015- December 2015

- Built a two-part lie detector with two other students that measures the electrodermal conductivity of a subject's fingertips and monitors the subject's heart rate
- The detector relies on the assumption that a lying subject will release micropulses of sweat at the fingertips and exhibit an increase in heart rate

Boulder Blast

Game Developer

Los Angeles, CA

March 2015- March 2015

- Created a game called Boulder Blast using C++ in which the player has to navigate through a series of robot-infested mazes in order to gather valuable jewels and find an exit to the maze
- Utilized animation graphics to make the game playable for any user who possesses Xcode

Leadership

UCLA Mentorship Program

Electrical Engineering Mentor

Los Angeles, CA

September 2016- Present

- Use my knowledge of the electrical engineering curriculum as well as active involvement on campus to enrich the college experiences of a group of underclassmen
- Conduct advisory lectures periodically throughout the year to serve as a quality resource for underclassmen

UCLA Regents Scholar Society

Scholar and Alumni Coordinator in the Leadership Development Committee

Los Angeles, CA

September 2014- Present

- Contacted Regents alumni from as far back as the Class of '95 and organized the annual Alumni Mixer Event
- Placed among the top 1.5% of freshman applicants to UCLA and qualified as 1 out of the 100 students who received the offer of scholarship