

# Navid Mir

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## Education

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**ELECTRICAL ENGINEERING B.S.** | UNIVERSITY OF CALIFORNIA, SANTA BARBARA (UCSB)

JUNE 2021

- 4.0 GPA
- 6 x Dean's Honors List for Engineering, Engineering Honors Student
- Activities: IEEE UCSB Chapter, Rocket Project Laboratory, Intramural Basketball, Violin in Pop's Orchestra,

## Work Experience

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**ELECTRICAL ENGINEERING INTERN** | VIVAX-METROTECH

JULY '19 – SEP '19

- Helping to analyze and test an RFID transmitter circuit to attain required antenna output while maximizing efficiency
- Using Altium to assist with PCB design of several configurations of the RFID transmitter circuit
- Minimizing losses in high-voltage boost and fly-back converters to efficiently increase power output in a power supply

**MACHINE LEARNING INSTRUCTOR** | IDTECH

JUNE '19 – JULY '19

- Taught an introductory machine learning with Python course to a class of 10 high school students
- Instructed students about neurons, neural networks, and supervised learning algorithms
- Led two projects both involving training a neural network to perform linear regression: one with a self-defined neuron class and one using the TensorFlow library

## Projects

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A portfolio of my projects can be found at my website: [navidmir.com](http://navidmir.com)

**LIQUID OXYGEN/METHANE ROCKET** | ROCKET PROJECT LABORATORY AT UCSB

APRIL '19 – PRESENT

- Working on Avionics sub-team of 30-person group designing a rocket to compete in Spring 2020 FAR MARS competition
- Designing the ground systems, which includes the ground computer (running Kalman filtering on rocket sensor data), launch control, and emergency ventilation control

**ELECTROVIBRATIONAL DISPLAY** | RE TOUCH LAB

FEBRUARY '19 - MARCH '19

- Tested and analyzed high voltage converters needed for capacitive touch displays that mimic textures

**LED CUBE DISPLAY** | IEEE UCSB CHAPTER

OCTOBER '18 – FEBRUARY '19

- Assembled 4 x 4 x 4 LED cube and wrote Arduino microcontroller code to make designs display on the cube

**FACIAL-RECOGNITION SMART LOCK** | SB HACKS V HACKATHON

JANUARY 11 – 13, 2019

- Designed and put together hardware and worked on software integration of a Raspberry Pi that accesses GCP server for a facial-recognition program response to open a lock for our team hackathon project, "openSesame"
- Awarded "Best Security Hack Award" sponsored by Arthrex, Inc.

**PLASMA SPEAKER** | IEEE UCSB CHAPTER

OCTOBER '17 - MAY '18

- Assembled circuitry involving signal generators, amplifiers, and transformer to produce sound with high voltage plasma arc

## Skills

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**SOFTWARE:** C++, Java, MATLAB, Python (Matplotlib, NumPy, TensorFlow, Socket), Arduino programming, Quartus II FPGA simulation, SolidWorks CAD, LTspice circuit simulation, Altium PCB design

**HARDWARE:** Designing and analyzing digital/analog circuits, microcontroller circuits using Raspberry Pi, microprocessor circuits using Arduino, through-hole and SMD soldering

## Awards

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**BOEING SCHOLARSHIP** | UCSB COLLEGE OF ENGINEERING SCHOLARSHIP COMMITTEE

JANUARY 28, 2019

**ARTHREX BEST SECURITY HACK AWARD** | SB HACKS V HACKATHON

JANUARY 13, 2019

- Presented for Facial-Recognition Smart Lock "openSesame"

**ENGINEERING WRITING EXCELLENCE** | UCSB WRITING PROGRAM

MAY 22, 2018

- Presented for my recommendation report for commuting UCSB students