

# Navid Mir

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## Education

### UNIVERSITY OF CALIFORNIA, SANTA BARBARA (UCSB)

EXPECTED JUNE 2021

- Electrical Engineering B.S.
- 4.0 GPA
- 6 x Dean's Honors List for Engineering, Engineering Honors Student

## Work Experience

### MACHINE LEARNING INSTRUCTOR | IDTECH

JUNE '19 - PRESENT

- Teaching an introductory machine learning course to a class of 10 high school students. I instruct students about neurons, neural networks, and their basic functions. I cover supervised learning algorithms and have students work on 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

### GROUND SYSTEMS ENGINEER | ROCKET PROJECT LABORATORY AT UCSB

APRIL '19 - PRESENT

- Working on the Avionics sub-team of the 30-person project to design a rocket to compete in the FAR MARS competition in Spring of 2020. My role is to design the ground systems, which includes the ground computer (running Kalman filtering on rocket sensor data), launch control, and emergency ventilation control. [<http://www.rplatucsb.com/index.html>]

### IEEE WEBSITE DEVELOPMENT | IEEE UCSB CHAPTER

NOVEMBER '18 - PRESENT

- Maintaining Projects Section of the UCSB IEEE Website as a member of the Web Development Team
- [<https://ucsbieee.org/projects/>]

### 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"
- [<https://devpost.com/software/sbhacks-gz8oix>]

### MICROMOUSE ROBOT PROTOTYPE | UCSB ROBOTICS

AUGUST '18 - SEPTEMBER '18

- Designed circuit for robot with IR sensors, motor drivers, and stepper motors and wrote microcontroller code to extract sensor data and operate motors for our 4-person team

### 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

**PROGRAMMING:** C++, Java, MATLAB, Python (Matplotlib, NumPy, TensorFlow), Arduino

**TECHNICAL:** Designing and building digital circuits, surface mount and through-hole soldering, simulating with FPGAs using Quartus II program, CAD using SolidWorks, Raspberry Pi, Arduino, LTspice

## Awards

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

JANUARY 28, 2019

### ARTHREX BEST SECURITY HACK AWARD | SB HACKS V

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