Navid Mir

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Education

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, Pop's Orchestra

Work Experience

ELECTRICAL/EMBEDDED SYSTEMS ENGINEERING INTERN | *VIVAX-METROTECH* JULY '19 – SEP '19

- Tested and optimized RFID transmitter circuit to attain required antenna output power while maximizing efficiency
- Used Altium Designer for PCB design of several configurations of the RFID transmitter circuit
- Designed efficient high voltage switching power supply for D-class amplifier, controlled with C code on ARM-based MCU

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

A portfolio of my projects can be found at my website: navidmir.com

LIQUID OXYEGEN/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 RESEARCH ASSISTANT| *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

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

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

Awards

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