Navid Mir

San Jose, CA | (408) 505 - 6492 | nmir@ucsb.edu | navidmir.com | https://www.linkedin.com/in/navidmir/

Education

ELECTRICAL ENGINEERING B.S. | *UNIVERSITY OF CALIFORNIA, SANTA BARBARA (UCSB)* JUNE 2021

- 4.0 GPA
- Emphasis on *Embedded Systems* and *Signal Processing*
- 7 x Dean's Honors List for Engineering, Engineering Honors Student, Tau Beta Pi Honors
- Activities: Undergraduate Research in Signal Processing, IEEE UCSB Chapter, Intramural Basketball, Pop's Orchestra

Work and Laboratory Experience

UNDERGRADUATE RESEARCH ASSISTANT | *SIGNAL PROCESSING LABORATORY* JANUARY '20 – PRESENT

- Working in Professor Hua Lee's Signal Processing Laboratory on beamforming algorithms

ELECTRICAL ENGINEERING INTERN | *VIVAX-METROTECH* JULY '19 – SEPTEMBER '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 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 – JANUARY '20

- Worked on Avionics sub-team of 30-person group designing a rocket to deliver 1 kg payload to 45,000 ft
- Researched on Kalman filtering algorithm to process sensor (IMU, barometer, GPS) data to estimate rocket position
- Configured RF communication between two development boards using LoRa to allow rocket to ground communication

LED CUBE DISPLAY | *IEEE UCSB CHAPTER* OCTOBER '18 – FEBRUARY '19

- Soldered 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 '19

- Worked on team project for a lock that grants entry to users via facial recognition of their photos uploaded on our website
- Designed and developed hardware and worked on software integration for the smart lock
- 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: Verilog RTL programming, Quartus II and Xilinx FPGA simulation, C, C++, Arduino programming, Altium Designer PCB design, MATLAB, Python (TensorFlow, Socket), Java, Jupyter Notebook, Linux, SolidWorks CAD, LTspice circuit simulation

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

Awards

JOSEPH SAYOVITZ SCHOLARSHIP | *UCSB COLLEGE OF ENGINEERING SCHOLARSHIP COMMITTEE* JANUARY '20

BOEING SCHOLARSHIP | *UCSB COLLEGE OF ENGINEERING SCHOLARSHIP COMMITTEE* JANUARY '19

ARTHREX BEST SECURITY HACK AWARD | *SB HACKS V HACKATHON* JANUARY '19