

# Alina Suon

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## Education

**California State University, Long Beach**

Major: Computer Engineering | Senior Standing

Long Beach, CA

*Expected Graduation: May 2020*

## Technical Skills

**Programming:** Python, C++, C, Java, Verilog, MATLAB, Assembly (Arm, 8051), VHDL

**Tools:** Electronic Design Automation (EDA) - Xilinx ISE Design Suite, LTSpice, Vivado

Software Development - Keil µVision, Microsoft VisualStudios, Dev C++, Eclipse

## Project Experience

### UART

*March 2019*

*Project Lead*

- Developed a circuit for asynchronous communication to transmit and receive serial data
- Verified the receive engine through test fixtures to show synchronized data collection with the TX engine
- Created a Chip Specification (SOC) report to document successful UART chip design

### PONG Simulation

*September 2018*

*Project Lead*

- Developed a computer game using a FPGA to simulate and play system on a monitor console
- Programmed a VGA controller in Xilinx to generate synchronous signals and outputs the data pixel serially
- Coded a pixel generator to create fixed objects and designate pins to output colors
- Created a self checking test fixture in Verilog to verify synchronous digital design of program

### Smart Bartender

*October 2018*

*Project Member*

- Constructed 12' x 16' autonomous bartending machine utilizing a raspberry pi circuit to dispense beverages
- Programmed Raspberry Pi to manage between drink possibilities and pump configurations to display on LCD
- Assembled electrical circuit on printed circuit board by following schematic
- Wired and soldered switches, buttons, and motors to the printed circuit board

### Autonomous Line Following Robot

*April 2018*

*Project Member*

- Designed a two-wheel dc motored autonomous robot using analog feedback to follow a course path
- Developed LTSpice models for analog circuit design to demonstrate theoretical functionality
- Constructed the circuit with IR photocell sensors to detect the course path

## Professional Affiliations

**Theta Tau - Professional Engineering Fraternity** [Member]

*October 2018 – Present*

- Organized 5+ service and brotherhood events for 40+ members to ensure personal and professional success

**Society of Women Engineers (SWE)** [Member]

*February 2017 – Present*

**Embedded Applications Technology Society (EAT)** [Member]

*September 2016 – Present*

## Volunteer

### MAES - STEM Outreach

*April 2019*

- Lead workshops on hurricane resistant structures to expose students to STEM fields
- Engaged students in workshop to promote problem-solving skills, creativity and teamwork / collaboration

### Bolsa Chica Conservatory

*October 2018 – November 2018*

- Restored the natural habitats of the wetland by reducing environmental debris and invasive plants
- Conducted research on native and invasive plants within the habitats of the wetland

### The Children's Clinic (TCC) Annual Walk

*October 2018*

- Managed event booths for incoming participants and enforced directed traffic for attendees
- Raised awareness of the care, service, education, and outreach of TCC to the Long Beach community

## Interest and Hobbies

Power supply unit, environmental technology, mechanical engineering, graphic design, cars, skateboarding