

# George J. Suarez

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## Engineering Projects

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### Robot Line Following/Object Avoid Car

- Built an Arduino Uno micro-controlled car that used sonar sensors, IR sensors, and servo motors to follow a black line through a course and employ sonar signals to avoid a large object that split the course. The vehicle also returned to the start line upon successfully completing the course. The vehicle was also programmed with the Arduino IDE, using C/C++ language.

### Servo Arm Controller

- Using LabView, a servo motor with arm, and an Arduino Uno, a robotic arm was built that was controlled with a potentiometer. The potentiometer was programmed with LINX functions in LabView where the controller would read voltage signals from the potentiometer and then tell the servo to position in  $\mu$ S based on the voltage reading from the potentiometer.

## Experience

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### Junior Implant Technician (Internship)

Cutting Edge Ions of Anaheim, CA

June 2019 – Oct 2019

- Produced various types of implanted SiC wafers for semi-conductor industry using Varian ion implant machines in a clean room environment. Worked with high voltages, within the KeV range.
- Was offered a permanent position after completing a three-month internship.
- Assisted in development of test plans and procedures.

### Propellant Technician I

ERC Inc. of Edwards AFB, CA

April 2014 – Feb 2017

- Supported development of the solid rocket propellant research program for the Air Force.
- Participated in explosives/propellant testing within government and state regulations.
- Assisted in development of test plans and procedures.

### Sergeant/Field Radio Operator

USMC of Bell Gardens, CA

Feb 2010 – Feb 2018

- Set up and monitored radio frequencies to detect distress calls and responded by dispatching emergency equipment, air support, medical evacuations, quick reaction forces, and supporting guidance from proper authority.
- While overseas, was responsible for making sure communications between supporting air assets, ground forces, and vehicle patrols were squared away, typically for a small team unit.

## Skills

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- Currently learning HTML, CSS, and SQL in free time. Have developed skills in Excel, Visual Studio, Visual Studio Code, LabView, Microsoft Office, C/C++, Assembly Language, DMM's, Function Generators, Oscilloscopes, Variacs, Soldering, AC/DC theory, MultiSim / Eagle CAD(some experience drawing PCB designs from classroom training), Autodesk AUTOCAD. Some experience with RS232 and USB. Have basic understanding of N Channel MOSFETS and NPN transistor in microcontroller(Arduino Uno) applications. Some experience programming Digilent BASYS 3 FPGA using Xilinx VHDL programming.

## Education

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California State University, Long Beach

*Bachelor of Science, Electronics Engineering Technology*

August 2018 – Dec 2020

Antelope Valley College, Lancaster, CA

*Associate of Arts, Liberal Arts Math & Science*

August 2014 – Dec 2017