

My dream to one day work in the field of electrical engineering stems from the days I used to spend playing with a bundle of intertwined wires, a handful of alligator clips, and a few LED lights as a child. Growing up, I loved to play with wires and circuits, and in pursuing this passion, I stepped into one of the most memorable experiences of my life.

In the summer of my tenth grade year at Clark Magnet High School, I was privileged to intern at iRobot, a technology firm. There, I conducted experiments with products, ranging from automatic vacuums to the telemedicine robot. I recorded data, which was later reviewed. I learned that a product's efficiency and durability are only part of what the company promises, and that safety is the top priority. During my spare time, I cleaned shelves and organized the charging station, a mess of tangled wires and robot chargers.

After weeks of watching my supervisor work with solder, he finally gave me my first lesson. He showed me how to handle the soldering iron and handed me the tool. I lifted the iron, touched its tip to a roll of solder, and slowly lowered the iron placing a blob of solder to connect a resistor to the circuit board's smooth surface. I felt a sense of empowerment that I could not possibly find elsewhere. At that moment, I felt the same raw passion for building and piecing together the puzzle that I experienced so many years ago when I built a circuit with an LED bulb and a battery pack. This time, I was building circuits to control an entire robot. That is when I realized: *This is it*. This is the career I have been so desperately seeking. It makes me excited and curious, even frustrated sometimes. Engineering is the field for me.

This year, as an Electrical Engineering major at UCLA, I worked on a project in my Introduction to Engineering Design class, in which I developed IoT Robot coordination systems using secure data transport methods based on SSH connection for secure file transfer, used the Intel Edison with Arduino compatible shield to control the robot car, and implemented C code program systems that continuously and autonomously generate and receive control command files, transmit over SCP from the control IoT Node, and execute actions on the robot.

In the future, I would like to work in the field of biomedical informatics and work on biomedical devices. I am also interested in network security and embedded systems.