JIAZHENG BIAN (DAVID)

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EDUCATION

University of California, San Diego   **Exp. Graduation Mar. 2023**
M.S. Electrical Engineering - Intelligent Systems, Robotics & Control
University of California, San Diego   **Exp. Graduation Dec. 2021**
B.S. Electrical Engineering - Computer System Design| Major GPA: 3.68

SKILLS

Programing Langue: Python3, C/C++, HTML5, CSS3, JavaScript
Software: LabView, MATLAB, SolidWorks, Autodesk Inventor, Altium, Eagle CAD, OrCAD Pspice
Other experience: Arduino, ESP32, Raspberry Pi

PROJECTS

IEEE Grand PrIEEE Project | Team Leader   **Oct. 2019 – May 2020**
- Leader of a four people group. Designed and built an autonomous RC car to follow a ~250 ft long track of white tape on the carpet.
- Designed the H-bridge PCB for the motor control by using Altium, and implemented the PID control for the car by using programing language C.
- Improved leadership experience and technical skills. Specifically, the knowledge in Altium, Arduino, and programing language C.

CapeX Project | Developer   **Jan. 2020 – Mar. 2020**
- CapeX is a website that can let UCSD students compare and find the perfect classes for them. The website has the capability to search for classes name, professors name, or department. It can provide the average grades that former students got, percent of recommendation, and study hours per week.
- Wrote the front-end of the website by using HTML, CSS, and JavaScript, also designed the main page of the website.

LabView Elevator   **Dec. 2020**
- Designed a simulated elevator by using LabView and Arduino, the elevator has a really good user interface with animation to show how the elevator moving from one floor to another, and how the door opens after it arrives. The related hardware will also respond to the functionality. It can select a floor, call an elevator on a different floor, hold the door, and fire alarm.

Web Drone Controller   **Feb. 2021 - Mar. 2021**
- Designed a web-based Tello drone controller by using HTML, CSS, JavaScript, RESTful APIs for the front end, and Python, SQL for the back end. The website can control the drone by sending commands one by one or send a bunch of the commands at one time. It can also show the current state and battery level of the drone.

EXPERIENCE & RESEARCH

Karcher Morris' lab | Researcher   **Jul. 2020 – Present**
- My research consists of measuring the ergonomic performance of surgeons using a wearable device. Many surgeons are in poor physical positions throughout a surgery and develop bad habits throughout their careers. To prevent this from happening, our research team is creating a device that would monitor a doctor's performance and provide feedback so that they can make necessary adjustments.
- I am designing and developing a flexible, wearable device that can be attached to the neck and house sensing equipment along with a microcontroller to process the data.
- I designed the flexible PCB that covered by soft silicon to make the device easy attached on the neck.

UC San Diego EPRP | Researcher   **Sep. 2020 - Present**
- Implemented a low-cost scale can be attached with a testing bottle and have an error less than 5mg by using Raspberry Pi, HX711 ADC, and 100g load cells.
- The scale can record data and convert them into graphs for research use. I designed the system by using Python programming language and the data will be stored in a micro-SD card.

VOLUNTEERING

Mt. San Antonio College Robotics Team   **Sep. 2018 – Jun. 2019**
- Programmer, Assembler
UCSD CSSA (Chinese Students and Scholars Association) | Tech Dept.   **Sep. 2019 – Present**
- Programmer, Photographer