MINGHUI ZHAO

(858) 405-3316 ▪ 3535 Lebon Dr. Apt # 5307, San Diego, CA, 92122 ▪ scott@scottz.net ▪ linkedin.com/in/scott-zhao

OBJECTIVE

An opportunity to be involved in industrial engineering projects on embedded systems, Internet of things, wireless communications, data analysis, and machine learning.

EDUCATION

University of California San Diego – *La Jolla, CA*   Expected June 2020
B.S. Electrical Engineering
Minor: Mathematics, Cognitive Science
Cumulative GPA: 3.51
Relevant Coursework: C Programming, Python for Data Analysis, Data Networks, Computer Architecture, Analog Design, Digital Design, Linear System Fundamentals

RELEVANT EXPERIENCE

Talke Lab UCSD – *La Jolla, CA*   April 2017 – Present
Research Assistant
- Developed a wireless embedded *Hand & Ergonomic Motion Tracking System* to help medical students and doctors on surgical operation training and ergonomic health monitoring.
- Designed and fabricated PCB for the system and fit into a 3D printed soft watch case.
- Compared and analyzed the performance and data fidelity on TCP/UDP transmitting protocols, and implemented buffering and data recovery algorithms to transmit data more efficiently with better integrity.

UCSD Electrical and Computer Engineering Department – *La Jolla, CA*   September 2016 – Present
Undergraduate Teaching Assistant
- Work as a TA for ECE 5 (Intro to ECE) and ECE 16 (Rapid Software & Hardware Design) since freshman year, and acquired 100% student recommend rate in a total of 7 quarters worked.
- Lead lab section meetings and announcements in addition to other duties including coordinate tutors on material preparation, organize class project competition, develop lab instructions and assignments.
- Train student on hands on skills including *3D CAD & Printing*, *PCB design*, *laser cutting* and *soldering*.
- Interact with students including answer technical questions, debug circuits & programs, inspire and assist on developing their own project, and as a result successfully bring more than 450 students essential skill sets into creating cool projects and interest in ECE besides all the theories.

PROJECTS (more showcased at *scottz.net/projects*)

Smart Home Remote Watering (*scottz.net/water*)   August 2018 – September 2018
- Developed a wireless embedded system to water plants autonomously or remotely using mobile phones over the Internet with a cross platform mobile APP developed in *Flutter*.

Tubular Robot (*scottz.net/tr*)   April 2018 – June 2018
- Developed an autonomous terrain exploring & mapping robot with wireless controls and camera streaming.
- Assembled the robot from scratch including laser cut tubular chassis/wheels and 3D printed sensor holders.
- Programmed the microcontroller to read sensors, transmit data and react to command from PC wirelessly.
- Developed algorithms for obstacles avoiding autonomous driving and terrain mapping.

Real-time Traffic Monitoring and Analysis (*scottz.net/traffic*)   December 2017 – Present
- Programmed a script to pull out and plot traffic information from AMap API in real time.
- Compared the traffic data with weather data and analyzed the weather's cause on traffic jam.

SKILLS

- **Software:** Familiar to Solidworks, EagleCAD. Proficient in Microsoft Word, Excel, PowerPoint.
- **Programming:** Proficient in Python, MATLAB. Familiar to C, Flutter, Java.
- **Other:** Internet of Things, Embedded System, Unix.
- **Language:** Bilingual (English, Mandarin Chinese)