

# Robin Wang

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## EDUCATION

University of California, San Diego, Warren College, Computer Engineering CSE (class 2025)

## ENGINEERING EXPERIENCE ([Website](#), [Portfolio](#))

### **SHEIN (2022) System Reliability Engineer Summer Intern**

- worked with csv processing software and learned about agile development

**Qualcomm Institute Printable Robotics Engineering Research Assistant(2021-Present)** • Specialized in 3D printing techniques related to lightweight UAV airframes/electrical systems •

**CHEI(2021-Present):** Collaborating with lab researchers to print lidar scanned models of archeological structures and artifacts. Most recent work on El Castillo, Chichen Itza

- **Prandtl Wing(2021-Present):** ongoing research towards large scale 3D printable Prandtl wing UAVs capable of long endurance flights. Currently investigating airframe structural geometry and low power motor components
- **Autonomous Drone Catamaran (2023-Present):** ongoing construction and tuning of self designed, large, 3d printable catamaran USVs. It's designed to be easily scalable and intended as deployable, ocean going, sensor platforms for research

### **Personal projects**

- **Multirotor/VTOL(2022-Present):** Built and tuned drones, the most recent being a 730mm tricopter tilt rotor VTOL. Currently working on the power systems of a large fixed wing survey platform •
- **Self-Driving Car(2019-2022):** Designed and built a 1:12 scale autonomous vehicle for long range waypoint navigation that used GPS/compass for waypoint navigation and ultrasonic sensors for obstacle avoidance; Features designed to ensure reliability/adaptability
- **Custom Automated 3D printer(2022-2024):** added remote printing, dual extrusion, auto part ejection, etc to a creality CR10S frame. Results double print speed and add cheap exotic material capabilities. These mods required a full board replacement, additional sensors, and a firmware rewrite

### **Team projects**

- **Yonder Dynamics (2021–Present):** Co-electrical team lead and pilot for UCSD URC mars rover team. Focused on electrical system integration and training new members on PCB design/fabrication. Developed 3D printable omnidirectional delta arm. Scored 5<sup>th</sup> out of over 100 university teams.

## TECHNICAL SKILL SETS

### **Software**

- C/C++, Java, Python, Assembly, Blender, Marlin, Reprap, ArduPilot, ELRS
- Specialize in robotics control systems and hardware interface
- Intermediate experience with various protocols used in RC control links

### **Hardware design**

- **Computer Aided Design (CAD):** Fusion360, SolidWorks, Onshape, Cura
- **Electrical:** Altium 365, PCB design/manufacturing, general circuit troubleshooting •
- **Arduino/Rasp Pi:** Robotics control systems and integration into custom PCBs
- **RC Systems:** Extensive experience with RC scale vehicles, FPV, and related hardware/software for long-range air, water, and ground-based vehicles

**Certificates**

- Part 107 remote pilot, Class B CDL