Robin Wang

rowang@ucsd.edu | 858-922-3807| San Diego | www.linkedin.com/in/robin-wang-930009298/

EDUCATION

University of California, San Diego
B.S. Computer Engineering Grad. Feb 2025

RELEVANT EXPERIENCE (Website)

Qualcomm Institute Printable Robotics Research Engineering Assistant **Aug. 2021 – Feb 2025**
UCSD CHEI/DroneLab

- **Autonomous Shallow Water Surveying Vessel:** Designed and constructed 3D printed modular USV platforms in **Fusion 360** for autonomous shallow water surveying. Designed custom wiring harness, waterproof bulkheads, PCBs, and hull optimized for **FDM manufacturing**. Pending first author publication in MDPI journal (2.5 impact factor).
- **Aerial Survey Drone Pilot:** responsible for flying commercial multirotors (M300) with camera/lidar/hyperspectral sensor payloads for post disaster survey. Collaboration with AlertCalifornia.
- **Cultural Heritage Prop Fabrication:** Fabricated various props for art/museum exhibits using **CNC milling**, **laser cutting**, multi-material finishing, and large-scale **3D printing**.

PERSONAL PROJECTS

PotatoDB – Barcode Based Room Inventory System **Sep. 2024 - Present**

- Designed and implemented a local hierarchical database with nested storage tracking using **Python**
- Used **Java/HTML** to build user friendly front end and keyboard-free setting changes via barcode scan
- Implement recursive search algorithm to trace item-to-room path for efficient location retrieval of deeply nested item

Fixed Wing Survey UAV (MFE Believer) **Apr. 2024 – Feb 2025**

- Planned and assembled all hardware/electrical components such as propulsion and controls
- Constructed custom lightweight wiring layout, implemented/tuned **ArduPilot** firmware, used **ELRS** control/telemetry
- Optimizations allow 1+ hour endurance during autonomous mapping missions

Solar Ebike **Jun. 2023 - Present**

- Built dual motor ebike with mid drive for hill climbing and regen capable hub motor via VESC and dual throttles
- Integrated **Arduino** controlled relay bank for turn signals, headlight, data logging, etc. with WIP PCB using **KiCAD**
- Custom high/low voltage enclosures designed in **Fusion 360** and manufactured using **FDM printing** and **laser cutting**

TEAM PROJECT

Yonder Dynamics **Jun. 2021 – Aug. 2024**
Electrical Co-Lead

- Developed various custom PCBs using **Altium Designer** for mars rover intended for University Rover Challenge
- Lead drone team to construct an autonomous fixed wing signal repeater aircraft capable of 1-hour flights
- Focused on integration of 5 DOF arm with streamlined electrical layout, contributing to 5th place (out of 90+ teams)
- Currently working on a long endurance collective pitch helicopter UAV for 2025 URC competition

SKILLS

- **Hardware (3+ years):** Computer Aided Design (CAD): Fusion360, SolidWorks, Onshape, Cura, OrcaSlicer, Blender
- **Electrical (3+ years):** Altium 365, KiCAD, pSpice, LTspice, electrical troubleshooting, multimeter, oscilloscope
- **Software (3+ years):** C/C++, Java, Arduino, Python, Marlin, Reprap
- **Rapid Prototyping (3+ years):** CNC, laser cutting, MIG/TIG welding, FDM/SLA 3D printing, PCB manufacturing
- **RC Systems (8+ years):** ArduPilot, ExpressLRS, EdgeTX, aerial/rover/boat design and manufacturing

Certificates

- Part 107 remote pilot license (3 years), Class B CDL (3 years)