Robin Wang

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EDUCATION

University of California, San Diego
B.S. Computer Engineering (in progress) Expected Grad. Feb 2025

RELEVANT EXPERIENCE (Website)

Qualcomm Institute Printable Robotics Research Engineering Assistant **Aug. 2021 - Present**
UCSD CHEI/DroneLab

- **Shallow water surveying vehicle:** Designed and constructed 3D printed modular USV platforms for autonomous shallow water surveying. Capable of multi hour operations with 60 lbs payload. Craft underwent successful pool trials and planned for sea trials. Pending first author publication in MDPI (2.5 impact factor) journal
- **Prandtl Wing:** 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
- **Aerial Survey Drone Pilot:** responsible for flying multirotors with camera/lidar/hyperspectral sensor payloads for post disaster survey. Collaboration with AlertCalifornia.
- **Cultural Heritage Prop Fabrication:** Fabricated various large props from various art/museum exhibits

PERSONAL PROJECTS

Fixed Wing Survey UAV **Apr. 2024 - Present**

- built a large 1960mm wingspan UAV (MFE Believer) for aerial mapping
- Conducts regular missions to map surrounding terrain as well as in Utah for URC missions

Custom 3D printer **Mar. 2023 - Present**

- heavily modified 3D printer capable of reliable multi-material printing and automatic part ejection
- custom fabricated parts using CNC mill, laser cutting, 3D printing, soldering, etc

Tricopter VTOL **Oct. 2022 - Jan. 2023**

- built and tested a midsize tricopter tilt rotor UAV from modified RC airframe and 3D printed nacelles
- capable of autonomous flight via Ardupilot or acrobatic FPV flying for 30 min on 4s 2300mah LiPo

TEAM PROJECT

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

- Developed various PCBs for mars rover intended for University Rover challenge
- Lead drone team to construct a fixed wing long endurance signal repeater aircraft
- Focused on training new members and cleaning up electrical documentations
- Currently working on a long endurance helicopter UAV for next year's competition

SKILLS

- **Software:** C/C++, Java, Python, Assembly, Blender, Marlin, Reprap, ArduPilot, ELRS
- **Hardware:** Computer Aided Design (CAD): Fusion360, SolidWorks, Onshape, Cura, OrcaSlicer
- **Electrical:** Altium 365, PCB design/manufacturing, general circuit troubleshooting
- **Arduino/Rasp Pi:** General robotics control systems and integration primarily for vehicles
- **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 license, Class B CDL