NATHAN T. HUI

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OBJECTIVE   Electrical engineer looking to explore hardware and software design with a focus on system design and integration.

ENGINEERING EXPERIENCE

UCSD E4E / CISA3 - Project Lead / Graduate Researcher   Winter 2014 - current
- Leading and managing the development, testing, and deployment of C/C++ and Python embedded software and computing hardware for aerial wildlife radio tracking surveys using drones, using software-defined radios to detect radio trackers and embedded Linux single-board computers for online processing and tracking.
- Developed and tested 3D printed mechanical subsystems in Solidworks for mounting scientific payloads to multirotor aircraft.
- Analyzed post-crash telemetry in deployed and testing enviornments to determine and mitigate causes of crashes to facilitate drone system robustness.
- Developed and deployed embedded C software onto an ATMega microprocessor for controlling a sensor payload and aggregating data from low-level sensors over serial communications.
- Developed integrated 3-D visual mapping tools using stereo cameras to enable researchers to make high-quality 3-D models of areas in near real-time under an Undergraduate Research Fellowship from the Center of Integrated Access Networks (CIAN) in 2015.

UCSD SIO Jaffe Lab - Graduate Researcher   Spring 2018 - Summer 2018
- Utilized Python to develop a distributed control system for a hemispherical multi-camera array run by a cluster of Raspberry Pi Zeros, and created a workflow to synchronize and stitch immersive video from the camera array.

UCSD Veridrone - Graduate Researcher   Spring 2017 - Spring 2018
- Mentored an undergraduate research project examining using machine learning to predict multirotor failures by examining real-time telemetry.
- Performed state space exploration of slow discrete time implementation of source seeking algorithms.

EDUCATION

Master of Science, Electrical Engineering   September 2019
Focus in Intelligent Systems, Robotics, and Controls   GPA: 3.005 / 4.000
UC San Diego, San Diego, CA

Bachelor of Science, Electrical Engineering   March 2017
UC San Diego, San Diego, CA   GPA: 3.092 / 4.000

PORTFOLIO   *Linkedin* - https://www.linkedin.com/in/ntlhui

Github - https://github.com/ntlhui