Harry Jackson

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SUMMARY

Robotics engineer with electrical engineering industry experience, flexibility in startup environments, and a lifetime of DIY projects. Outcome-oriented team contributor with excellent interpersonal skills. I have a passion for building with my hands.

EXPERIENCE

Electrical Engineer

NASA Ames **July 2019 - January 2020, Moffett Field, CA**

- Deployed NASA's multispectral imagers (eMAS, MASTER, and PICARD) on a successful Earth Science research mission.
- Understood technologies including vacuum systems, cryogenic temperatures, ingress protection, and very low noise signal conditioning.
- Reduced noise issues by 30% by designing and prototyping a power supply with Solidworks, considering design for manufacturability.

Laboratory Engineer

Smart Wires **September 2017 - February 2019, Union City, CA**

- Increased lifetime performance of switches by 10 years by optimizing heatsink placement through experimental design.
- Designed and assembled test harnesses for qualifying power transmission devices, including thermal, frequency, and impulse response.
- Wrote wire harness assembly procedures for large electrical devices, in accordance with design for manufacturability, environmental sealing, and FCC standards.
- Repaired mechanical, electrical, and programming issues in PCB and controller prototypes, using oscilloscopes and surface mount soldering tools.

PROJECTS

THOR Robotic arm

April 2020

- Wrote a custom ROS controller to execute trajectories using smooth inverse kinematic solvers from a simulator.
- Wrote a second custom controller to use gamepad joysticks as input.
- Constructed out of 80% 3D printed parts, at a cost significantly lower than many commercial arms of similar size and payload capacity.

EDUCATION

Bachelor of Science in Robotics Engineering

Minor in Electrical Engineering • University of California, Santa Cruz • Santa Cruz, CA • 2017 • 3.2

COURSEWORK

Intro to Mechatronics

University of California, Santa Cruz • Waterfall planning, Solidworks, C++

Designed and built an autonomous drone with hierarchical state machine controller, for a competition.

INVOLVEMENT

Vice Chair

University of California, Santa Cruz • IEEE • January 2013 - Fall 2016

- Grew attendance and participation by 5x with regular events.
- Initiated a fundraising tradition of using a 3D printer to fulfil custom orders.

SKILLS

C++

Python

Solidworks

ROS

Surface mount soldering

PCB Layout