NATHAN KAU

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EDUCATION

2016 – 2020

Stanford University Mechanical Engineering, GPA 4.1

Relevant coursework

Design and Manufacturing	Artificial Intelligence	Feedback Control Design
Design Sketching	Mechanical Systems Design	Optimal Control

WORK EXPERIENCE

Summer 2018

Kitty Hawk Engineering Intern
- Helped develop flight control systems for electric VTOL aircraft and supported documentation efforts
- Collaborated with a small team of engineers to design, fabricate, and destructively test battery packs
- Learned to write code in a rigorous, safety-critical setting and design light-weight mechanical structures

2015 – 2016

Stanford University Research Intern
- Worked with research mentor at the Stanford Environmental Fluid Mechanics Laboratory to develop code to predict the water quality of the San Francisco Bay from satellite images, using computer vision and machine learning techniques
- Collaborated on paper brought to the 9th State of the Bay-Delta Science Conference, 2016

Summer 2014 & 2015

Matternet Engineering Intern
- Designed, fabricated, tested drones that delivered medical supplies in Bhutan and Papua New Guinea
- Developed code to optimize propulsion system for longest endurance and efficiency
- Prototyped payload delivery system for use in Matternet-Mercedes Benz package delivery vans

LEADERSHIP EXPERIENCE

2017 – Present

Stanford Student Robots Team Lead
- Project lead for Stanford Doggo, a novel four-legged robot that is a fraction the cost of existing quadrupeds and sets the record for vertical jumping agility
- Implemented quadratic programming-based balance controller for new 12DOF robot nicknamed Woofer
- Open-sourced project, available at https://github.com/nate711/stanforddoggoproject
- Submitted research to the International Conference on Robotics and Automation

2013 – 2018

MakeX Founder, Lead Mentor, Advisor
- Co-founded a student-run makerspace that has served more than 4,000 students
- Managed volunteers and mentored students in learning digital and analog prototyping tools
- Organized workshops for local students and presented at FabLearn, a Stanford conference on education

SKILLS

Design	Autodesk Fusion 360 (+ FEA & Render), Solidworks, Siemens NX, Illustrator, Photoshop
Code	C++, Python, Matlab, Arduino, Java
Fabrication	Manual and CNC Milling, Turning, Laser Cutting, 3D Printing, Composite Lay-up

Visit engineering and design portfolio at **www.nathankau.com**