Owen Li Dong Lin

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Personal Website with Engineering Portfolio: codingowen.github.io/OwensWebsite/

EDUCATION

National University of Singapore (NUS) *Aug 2021 – May 2024 (Expected)*
- BE. Mechanical Engineering (Hons. First Class, Robotics Specialization) and 2nd Major in Innovation & Design Programme

Stanford University *Apr 2023 – June 2023*
- Entrepreneurship studies in MS&E 178 & MS&E 472 under the NUS Overseas Colleges programme

WORK EXPERIENCE

Product Design & Systems Engineer Intern, Mill Industries Inc. *Jan 2023 – Dec 2023 (San Francisco)*
- Led design of Motor Grinder systems architecture and down-selection of final production designs (2 patents pending), achieving simplified design and significant cost reduction by 15+ components and $35 dollars/unit on 2nd generation product
- Collaborated with multiple teams to support the product design, systems architecture design, engineering validation and reliability testing from concept to production (Proto through DVT & PVT)
- Innovated low-cost, pneumatically actuated test fixtures for reliable quality control of injection molded part dimensions, currently deployed in the company's production factory.

UAV Mechanical Engineer Intern, Performance Rotors *May 2022 – Aug 2022 (Singapore)*
- Independent Product lead and design of powder payload release and mounting mechanism on a custom commissioned drone
- Innovation and development of 3D Printed ultrasonic generator housing and ultrasonic testing probe spring suspension system for Non-Destructive Testing (NDT) Operations
- Minimized manufacturing and assembly times of core products by redesigning mechanical mounts using DFM principles

Platoon Sergeant, Naval Diving Unit, Republic of Singapore Navy (Military Conscription) *Feb 2019 – Dec 2020*
- Presented the Best National Serviceman (Full-Time) Award for my tenure in the unit
- Led and oversaw combat diving operations for 50+ Divers as the Platoon Sergeant of the 51st Batch of Combat Divers under the Underwater Demolitions Group

COMPETITIONS & PROJECTS

Vidi Travel Companion Glasses, UC Berkeley AI Hackathon *June 2023*
- Innovated and designed a Smart Glasses concept that serves as an IOT-enabled travel companion & guide for the visually impaired, which utilizes GPT-4 for human–computer interface
- Led team through user interviews, product design, systems integration and software development, which entailed CAD design, 3D Printing, sensor integration onto a RPi 4 and developing a path finding algorithm for our monocular camera
- The project can be viewed here: https://devpost.com/software/vidi

Tapow Folding Lunchbox, James Dyson Award 2022 *July 2022*
- Innovated and designed a folding lunch box concept for reducing plastic waste from restaurant takeout, which made cleaning the lunchbox easier by folding down 3D, water-tight bowl to a 2D plate
- Led team of 5 engineers for full design and prototyping: CAD design, 3D Printing, mechanical fastening and assembly

International Space Challenge 2022 –Experimental Satellite Design Project *Dec 2021*
- Team clinched Finalist (2nd position) out of 540+ participants worldwide
- Designed an experimental payload, a High-Voltage Energy Harnesser for the satellite passing through Van Allen's Belt
- Used Fusion360 to design satellite structure and Systems Tool Kit (STK) Program to model satellite's elliptical orbit within Van Allen's Belt region

3D-Printed Hand Gesture Tracking Robot Hand *Dec 2021*
- Designed and improved CAD files of an open-source Robot Hand to resolve inherent fitting issues and strengthened joints
- 3D-Printed all parts, including TPU Joints and PLA Shells for the Hand and programmed finger controls with Arduino MCU
- Implemented OpenCV & CVZone packages for robot hand to detect and mimic hand gestures from a webcam

SKILLS

Software
- Languages and Competencies: Python, C++, C#, Matlab
- Robotics: Arduino, Raspberry Pi, ROS, Drone Flight Controller Pixhawk

Hardware
- Computer Aided Design: Siemens NX, Solidworks, AutoCAD Fusion360
- Prototyping/Design: Design for Manufacturing, Design for Assembly
- Manufacturing: Injection Molding, Metal Die-Casting, CNC Machining

Foreign Languages
- Korean, Mandarin Chinese