Iat Hou (Kevin) Fong

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SUMMARY

Mechanical engineer and medical technology enthusiast - with 4 years of experience in wearable medical devices, monitoring devices with sensors, fixtures and tooling from design, testing to validation. Looking for opportunities to design products and create sustainable impact in the healthcare industry.

EXPERIENCE

Mechanical Design Engineer – *Essai (Vendor of Intel)* **June 2018 – Present**

Achievements

- Reduced 20% on design lead time and raised 30% on manufacturing capacity of semiconductor test module through improvement on design for reusability and manufacturability
- Increased 45% on the yield rate by inspecting outgoing design as Material Review Board and maintain a high level of product safety, quality and reliability
- Led and trained new engineers on products' critical features, functionalities, and design rules

Responsibilities

- Communicated the voice of customers' needs on **design requirements** as a technical expert in a cross-functional team composed of product managers and manufacturing engineers
- Created detailed mechanical designs and drawing using **SolidWorks** and managed **ECO** and **BOM** for manufacture
- Performed **FEA analysis** and **data assessment** to optimize design structure and functionality
- Conducted **mechanical testing** and **inspection** on **first article / prototype** prior to High-Volume Manufacturing
- Designed and built **injection molded** shipping tray to improve shipment quality

Instrument Engineer Intern – *Intuitive Surgical* **June 2017 – June 2018**

Achievements

- Optimized product design and enhanced manufacturing and test efficiency by 40% for novel lung cancer diagnosis medical system through support of instrument design, prototyping, design of experiment and test method development
- Improved efficiency of fatigue test and integrity test on GUI by 93% through process automation using **Squish (C++)**

Responsibilities

- Conducted hardware testing upon prototyping fixtures using **SolidWorks** design, **Machine Shop** and **3D printer**
- Optimized hardware prototypes through **design of experiment** and statistical analysis using **Excel** and **MiniTab**

Research Assistance – *Robotic and Intelligent System Lab, Arizona State University* **March 2016 – June 2017**

Achievements

- Authored research papers to represent novel health monitoring methods for personalized assistance with wearable device

Responsibilities

- Designed devices with **SolidWorks**, **FEA** analysis, testing, **CNC machining** and assembling to conduct research

TECHNICAL SKILLS

- Concepts DFA, DFM, FEA, GD&T, ECO, Injection Molding, Welding, Rapid Prototyping, Statics, Dynamics
- Programming MATLAB/Simulink, C/C++, Python
- Applications **CAD (SolidWorks)**, PDM, AutoCAD, DraftSight, ANSYS, Matlab, MiniTab, LabVIEW, Bluehill, MS Office
- Hands on Machining, CNC, CAM, Soldering, 3D Printing, Laser Welding, Micrometer, Microscope, Caliper, Instron
- Languages Fluent in Mandarin, Cantonese and English

EDUCATION

Master of Science – Mechanical Engineering May 2017
Arizona State University, Tempe, AZ

Bachelor of Science – Mechanical Engineering August 2014
University of California, San Diego, La Jolla, CA

CERTIFICATIONS

- **ISO 13485:2016 – Design and Development of Medical Device** - Udemy, April 2020
- **GD&T Basics Fundamentals** - Pareto Learning LLC / GDandTBasics, June 2019
- **Certified SOLIDWORKS Associate** - Dassault Systems, July 2018

PUBLICATION

- **Automatic Virtual Impedance Adaptation of a Knee Exoskeleton for Personalized Walking Assistance** – P. Chinimilli, Z. Qiao, V. Jhawar, ***I. H. Fong***, W. Zhang. IEEE Robotics and Automation Letter and IROS, 2018