JARED JACKMAN

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EDUCATION

UNIVERSITY OF WATERLOO
B.A.Sc. Mechanical Engineering – May 2020

SKILLS

DESIGN

- SolidWorks: - Surfacing & Simulation
- ANSYS, COMSOL
- DFM
- GD&T

MANUFACTURING

- Machining
- Injection Molding
- 3D printing
- Sheet Metal Fabrication

LANGUAGES/HARDWARE

- Python, C/C++, HTML
- MATLAB
- Arduino/RaspberryPi

COURSES

- Mechanical Design
- CFD
- Autonomous vehicles
- Advanced Manufacturing
- Machine Learning
- Control Systems

AWARDS

- Barbados exhibition scholarship - $7500/year
- University of Waterloo President's Scholarship - $2000

INTERESTS

- Product Design
- Advanced Manufacturing
- Piloting
- Basketball, Soccer

EXPERIENCE

ENGINEERING INTERN

KITTY HAWK | MOUNTAIN VIEW, CA | Sept - Dec 2019

- Conducted 5-why analysis to determine the cause of fractures in cockpit kill-switch housings
- Redesigned the cap for the kill-switch housings and performed material selection
- Optimized the warehouse layout and implemented new kitting processes which reduced lead time by **35%**

MECHANICAL ENGINEERING INTERN

ECOBEE INC | TORONTO, ON | Jan – April 2019

- Collaborated with engineers to implement steel-safe changes to injection molded plastics and reduce tooling cost by **$9500**
- Designed and built a PCB installation fixture reducing assembly time by **31%**
- Worked with suppliers in **China**; released detailed drawings and completed DFMs
- Designed and programmed an automated occupancy test stand for the new Ecobee Smart Thermostat

AUTOMATION DESIGNER

STACKPOLE INTERNATIONAL | HAMILTON, ON | May – Aug 2018

- Designed an automated oiling station which reduced cycle time **30%** to **7 seconds**
- Implemented a test station to detect the presence of **1 mm** thick bushings in the inner gear rotor of pumps
- Designed a **spring-loaded** End of Arm tool for robots on the assembly line

MANUFACTURING INTERN

DYNAPLAS LTD | TORONTO, ON | Sept – Dec 2017

- Utilized **DFMEA** principles to identify shortcomings in a go/no-go gauge
- Redesigned the gauge resulting in savings of **$20,000/year**
- Designed an automated **pneumatic** swing chute to separate defective parts

PROJECTS

EXOSKELETON FOR STEP INITIATION

- Designed a **2 DOF** wearable to help Parkinson's patients overcome occurrences of Freezing of Gait
- Conducted **FEA** analysis on components to optimize their strength to weight ratio
- Designed a battery pack to enclose the batteries powering the exoskeleton

STEWART PLATFORM

- Designed a **6 DOF** hexapod linkage which was programmed to solve a maze
- Programmed the platform using the Arduino microcontroller
- Utilized **inverse kinematics** for linkage design and motion planning