Braden Scott

Mechatronics Student

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Education

BASc, Mechanical Engineering, *University of British Columbia* 2018 – 2023
Mechatronics Option, 4th year
Co-op: Completed 3 work terms. Available 4-8 months beginning May 2022

Skills

Software/Programming
SolidWorks (CAD, FEA, Composer)
MATLAB, Excel
C/C++, Python, VHDL
Assembly Language
Miro, MS Teams

Fabrication
3D Printers (FDM, SLA), Machining
Circuitry, Soldering, Oscilloscopes
Micro-controllers (Arduino)
Manufacturing, Injection Molding
Test Jigs & Fixtures

Project Management
Leadership and Team Management
Design for Manufacturing & Assembly
FMEA, Root Cause Analysis
Agile, Lean Manufacturing
Project Reports and Proposals

Professional Experience

Product Engineer, *IFD Corporation* May 2021 – present | Vancouver
- Assisted in design and production of reliable mechanical safety sensors for distribution transformers that detect internal arcing faults and provide temperature feedback to utilities and linemen
- Developed design validation test plans following CSA and IEEE standards and performed mechanical testing (force, thermal, etc.,)
- Performed root cause analysis on non-conformance units and gathered data to present reports to team and customers
- Fostered strong relationships with utilities through addressing and resolving product concerns
- Cultivated skills in project management including planning, budgeting, risk management and communication
- Worked at manufacturing site PH Molds and gained hands on experience with assembly and manufacturing processes
- Managed a team of assembly workers through conducting quality inspections for 25,000+ units
- Created high quality customer facing visual work instructions using SolidWorks Composer

Fitness Floor Staff, *University of British Columbia* Aug 2019 – Jan 2020 | Vancouver
- Worked 20+ hours a week while maintaining full-time studies

Maintenance Specialist, *National Air Technologies* Jun 2018 – Sep 2018 | Vanouver
- Performed maintenance and repair service to HVAC systems at schools and apartment complexes

Projects

Leak Tester, *IFD Corporation*
- Designed fixture for production line to leak test units in pressure and vacuum
- Implemented tester and manufacturing process changes to increase production efficiency by 400%
- Used SolidWorks to create CAD models for prototypes and detailed design drawings for outsourced machining
- Sourced pneumatic components and sealing parts such as o-rings and gaskets

Pressure Relief Valve Sleeve, *IFD Corporation*
- Designed an injection molded sleeve to be added to existing PRV design that limits flow in vacuum but allows flow in pressure to still meet CSA and IEEE standards
- Specified and validated tolerances using 3D printed prototypes

Powered Air Purifying Respirator, *Team Design Project*
- Designed a light-weight PAPR device for health care workers for comfortable daily-use during the COVID-19 pandemic
- Responsible for SolidWorks CAD detailed design and risk analysis using FMEA

Remotely Controlled Vehicle, *Team Design Project*
- Designed and manufactured an RC Rover using a lathe, mill, hand tools and 3D printing
- Developed and optimized chassis design using material selection software and FEA in SolidWorks
- Placed First Place with combined score of Sustainability, Cost, Weight and Volume

Magnetic Levitation Device, *Individual Design Project*
- Built a levitation device using electromagnetic principles and a Hall Effect Sensor
- Soldered components to PCB and machined metal fixture by lathing, milling, sheet metal forming, welding and drilling

Accomplishments

BC District Physical Activity Scholarship

Team Canada Baseball

Interests

Sustainability • Travelling • Hiking • Weightlifting
Problem Solving • Golf • Baseball • Hockey