Julian Fawkes

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Education

University of British Columbia 2017-2023
Bachelor of Applied Science in Mechanical Engineering *Vancouver, Canada*

- **Relevant Coursework:** Mechanical Vibrations, Finite Element Analysis, Computer-Aided Manufacturing, Automatic Control.

Work Experience

Verkor SAS January 2024 - July 2025
Battery Cell Mechanical Validation Engineer *Grenoble, France*

- Reduced test cycle time by 75% by designing a patent-pending sealing assembly for high-pressure bursting of pouch cells.
- Led the definition, delivery, and operation of R&D manufacturing and validation equipment for hard-case cell development.
- Drove requirement traceability by managing design changes, authoring validation plans, and generating statistical reports in R to ensure compliance.
- Gained knowledge in Catia, Design for mass-production, R, Pouch & hard casing cell design.

RENA Technologies GmbH January - August 2022
Mechanical Engineering Praktikant *Gütenbach, Germany*

- Cut costs by 12% by redesigning automated industrial process assemblies and optimizing component sourcing in photovoltaic manufacturing.
- Gained knowledge in Solidworks, Sheet metal assembly design, Material selection, ISO 1101 GD&T.

Dometic Group AB January - August 2021
Product Design Engineering Co-op Student *Vancouver, Canada*

- Boosted product quality and reliability by designing and implementing an automated cycle test rig for a steering mechanism at 50% of the incumbent cost.
- Saved $10,000 and reduced production downtime by leading continuous testing and root-cause analysis to resolve manufacturing errors.
- Supported prototype development as a machinist, producing functional parts for testing and validation.
- Gained knowledge in Manual machining, ASME Y14.5 GD&T, C programming.

UBC iREACH Lab May - December 2020
Mechanical Engineering Co-op Student *Vancouver, Canada*

- Enabled rapid identification and tracking of pollutant plumes by mobile laboratory operators by developing an open-source, novel, real-time data visualization dashboard using Python.
- Gained knowledge in Python, data processing in Matlab and R.

Technical Projects

Audio Vectorscope 2023
Art/Electronics *Personal Project*

- Ground-up design project mapping real-time audio sampling onto a display to visually render music.
- Designed and hand-soldered a four layer PCB to incorporate analog and digital audio input stages, an SPI display output, and a Teensy microcontroller.

Shoe Breathability Testing Apparatus 2022
Arc'teryx Equipment Inc. *Capstone Project*

- Advanced the comfort and performance of the footwear of an industry-leading company by developing a novel system for evaluating the breathability of shoes.
- Enabled accurate and reproducible data collection to facilitate data-driven decision-making and informed product development.

Project Car 2016
1996 Mazda Miata *Personal Project*

- Upgraded transmission, suspension, and engine components and installed turbocharger.
- Adapted parts as needed and tuned ECU.

Technical Strengths

Design	Solidworks, Siemens NX, Catia, Onshape, Grasshopper, GD&T, Hand-sketching
Machining	CNC mill, Manual mill, Manual lathe
Programming	Matlab, Python, R, C

Student Teams

UBC Sailbot 2018 - 2020

- Led design and construction of a structural welded boat cradle, enabling the transport and launching of an autonomous sailboat.
- Increased vessel solar panel output by redesigning and machining a hot-swappable mounting system.

Hobbies

Skiing, Ski touring, Hiking, Rock climbing, Speaker building, Woodworking, Electronics projects.

Languages

Native English, C1 French.