Jeremy **Voldeng**

MECHATRONICS ENGINEER WITH A PASSION FOR PRODUCT DESIGN

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Technical Skills

Mechanical Design, Fusion 360 | Injection Molding | Sheet Metal | 3D Printing | Laser Cutting | CNC Design | Error Analysis
Electrical, Communication Protocols | Lab Equipment | Soldering | PCBA Design/Board Bring-up
Software, C++ | Java | Python | Matlab | Github | Software Structure | Digital Systems
General, Microsoft Office | Creative Problem Solving | Attention to detail | Product Development Cycle

Work Experience

EXACT Technology Corporation
Toronto, ON

Design Engineer — *June 2022 - February 2025*

- Owned the mechanical design of a fleet of products specialized for use in the concrete and construction industries. Leveraged past experience to develop ruggedized, reliable and versatile products.
- Implemented firmware of multiple 'bed of nails' test fixtures using Python to ensure reliability of PCBAs during production.
- Collaborated with cross-functional teams including product development, software, manufacturing, and quality assurance to ensure design feasibility and product excellence.
- Developed test plans and performed DFMEA validation tests on incoming product prototypes to mitigate risk and characterize system.
- Worked closely with Production team to address ECNs and implement solutions based on feedback, minimizing downtime and maintaining product quality.
- Performed occasional emergency onsite maintenance for clients when required.

Snow Spines Inc
Vancouver, BC

Junior Design Engineer — *July. 2021 - Mar. 2022*

- Lead product development of an electronic assist to back country-skiing. Design was critical to validate start-up concept.
- Iterative product design integrated background knowledge in mechanical CAD and electronics. Spearheaded design of motor fixture, electronics enclosures, and cable assembles. Used CNC and 3D printing for rapid prototyping.
- Strong understanding of product life cycle. Iterated through concept design, rapid prototyping and designed testing procedures to ensure correctness. Remained agile through shifting requirements.

Slant / JABT Laboratories
Vancouver, BC

Creative Software Engineer — *Jan. 2018 - Apr. 2018*

- Worked as a team to develop an interactive display with information about the history of residential schools in Canada.
- Designed an intuitive interface for first time users that translated raw data into an easily digestible manner.
- Worked on coordinated and syncing up an array of Apple devices with a focus on minimizing communication latency.
- The end result was an interactive, cohesive map synchronized across 3 displays containing location-based historical information.

Project Experience

Engineering Physics 479 Capstone Project
Vancouver, BC

D-Wave Magnetic Field Degausser — *Sept. 2020 - Apr. 2021*

- The second of two capstone courses. Designed a degaussing system capable of degaussing PCB's below 50pT. We designed the system over the fall of 2020 and constructed it through spring.
- Gained valuable project management from discussions with our sponsor D-Wave as well as professionals studying in the field. Communication played a large part in our understanding of this projects goals.

Engineering Physics 253 'Robots'
Vancouver, BC

Summer Robotics Course based on MIT and Stanford courses — *June. 2018 - Aug. 2018*

- Placed 3rd in an intensive 2 month course competition focusing on rapidly prototyping and designing an autonomous robot as a team of 4, capable of efficiently traversing through a specific obstacle course.
- I was the mechanical lead of the team, designing a functional chassis consisting of a complex set of treads able to traverse over gaps and uneven terrain.
- Rapid prototyping and testing consisted of 3D modelling software and equipment such as a laser cutter and 3D printers.

Education

University of British Columbia
Vancouver, BC

BASc - Engineering Physics — *Sept 2016 - April 2021*

5 year UBC program dedicated to Software, Electrical and Mechanical Engineering with a focus on theoretical physics.