

# William Zittlau

## EIT, B. ASce Mechanical Engineering

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Kelowna, BC



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### Bio.

I'm a recent graduate with a desire for continuous learning and challenging projects. I enjoy working in creative, fast-paced environments, learn new concepts quickly, and deliver under pressure. I am very driven, and find the most reward from completing difficult tasks. This shows through both my personal projects as well as leisure activities. I love being outside and pushing myself, and running, skiing or biking for 8+ hour adventures on the weekend isn't uncommon.

My degree has given me a diverse skillset including management, problem solving, technical ability, progressive thinking as well as being equally comfortable in both a team based or individual role. My co-ops were focused on product development, where I was tasked with product design work, technical writing, cross-team communication, presentations, managing budgets and timelines, and participating in the development process from start to finish. Outside of school I have also been teaching myself programming, and have become proficient in Python, SQL, and modern web frameworks utilizing languages/technologies such as Vue.js, Static site generators, JavaScript ES6, HTML5, and CSS among others. As you can see, I strive for continuous learning and am not afraid to take on new endeavors or wear many hats. I'm data centric, with a strong attention to detail.

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### Technical.

**Software** – Solidworks, VS Code, Excel, Word, PowerPoint, Photoshop, Premiere Pro, Lightspeed POS

**Languages** – Python, JavaScript ES6, HTML5, CSS, Java, Bash, SQL, Markdown

**Frameworks** – Flask, Pandas, Selenium, Nuxt.js, Vue.js, Bulma.css, Pure.css

**DevOps / Deployment** – Git/GitHub, Heroku, Netlify, Windchill PLM

**Equipment** – Lathe, Mill, CNC, MIG Welding, 3D Printing, Injection Molding, Ski and Bike tuning equipment

**Certificates** – Class 5 BC Driver's License, CAA Avalanche Operations Level 1, WHMIS, Basic First Aid, Canadian Passport

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### Education.

**University of British Columbia**

2015-2020

**Bachelor of Applied Science – Mechanical Engineering**

*\*Graduated with Distinction*

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### Work Experience.

**Fresh Air Experience (Kelowna, BC)**

April 2015-2020

**Sales Associate/ Technician**

- Communicated with customers to understand their needs, and used my technical knowledge to find a product that would suit their current skills, budget, and goals resulting in customer satisfaction and higher sales.
- Performed professional fitting services for bikes, footwear, and ski equipment.
- Performed professional repairs and assembly on bikes and skis.

**CORE Energy Recovery Solutions (Vancouver, BC)**

January 2019 – September 2019

**Product Development Engineer Co-op**

- Designed new lab test station. (Solidworks, report writing, managing project timeline, managing budget, machining components)
- Created new lab equipment. (Solidworks, 3D printing, machining components, communicating with suppliers)

- Created showroom models. (Solidworks, communicating with Sales/Marketing team, create work instructions for manufacturing)
- Performed testing on products. (LabVIEW, setting up experiments, reporting results)

### **Poseidon Ocean Systems (Campbell River, BC)**

**May 2018 – September 2018**

#### **Product Development Engineer Co-op**

- Wrote technical documents for company products/procedures.
- Joined in the design process from problem definition to product delivery.
- Provided technical support and design work on load bearing welded steel structures and injection molded components.
- Communicated with suppliers/clients and delivered product presentations.

### **Johnson Bentley Memorial Aquatic Centre & District of Peachland (West Kelowna & Peachland, BC)**

**December 2013 - December 2016**

#### **Lifeguard/ Swim Instructor/ Pool Maintenance/ Swim Club Coach**

- Taught swimming lessons to children as young as 2, and coached competitive swimmers up to 16 years old.
- Worked both individually and as a team, staying calm and professional in rescues + first-aid administration.
- Took control of crowds, and concisely communicated directions to maintain beach safety.

## **Professional Projects.**

### **Engineering Capstone Group Project - Search and Rescue Drone with AI integration Modular add-on kit including HD camera, infrared camera, supplies delivery winch, AI processor**

**2019-2020**

- Raspberry Pi, Google coral, Solidworks, 3D printing, FLIR camera, Python (TensorFlow)

### **Design and build of new ERV testing station**

**2019**

#### **CORE Energy Recovery Solutions (Vancouver, BC)**

- Designed a new lab testing station which involved maintaining a project budget, SolidWorks design and modelling, machine shop use, researching and communicating/ordering from suppliers, managing the timeline along with other projects, rapid prototyping of different concepts, designing and testing a scale model to review and validate design choices, assembling components, and communicating/report writing the project's progress

## **Personal Projects.**

### **ETF Converter**

**2020**

**Take a user's portfolio containing ETFs from Yahoo Finance and return it with the weighted underlying holdings of the individual stocks.**

- Flask app launched to Heroku. Python (pandas, Beautiful Soup), web scraping, data frame manipulation, asynchronous processing, Jinja2, HTML/CSS, Git/GitHub.

**2020**

### **Skiing Forecast App**

**CRUD API + Mobile-first web app (Weather + Avalanche Forecast).**

- Flask RESTful API which generates routes/info for the UI app, launched to Heroku. Python (SQLAlchemy), Postgres SQL, HTTP-Auth, Git/GitHub.
- Flask app launched to Heroku. Python (pandas, Beautiful Soup, Bokeh), web scraping, responsive graphs, jQuery/Vanilla JS, Jinja2, HTML/CSS, Git/GitHub.

### **Rogers Pass SMS notifications**

**2020**

**Single Page Application which sends daily SMS notification on the updated statuses of WRAs.**

- Flask app launched to Heroku. Twilio, Python (Selenium, regex, SQLAlchemy), Postgres SQL, CRON-like task manager, web crawler, input validation + message flashing, Jinja2, HTML/CSS, Git/GitHub.

### **Home-made Splitboard package**

**2019**

**Snowboard / Binding / Boot modifications.**

- Used Solidworks and 3D printing to prototype/ design and create part drawings
- Developed and assembled DIY bindings using a combination of pre-fabricated and custom parts
- Rebuilt pivot in ski boot by making custom bushings and sourcing hardware
- Designed and machined adaptor plates to fit standard splitboard hardware mounting and dynafit toe pattern

### **Bikepacking Fork Bracket**

**2019**

**Touring bracket to mount water bottles / accessories to threaded bicycle forks.**

- Used Solidworks to design and create 3D models / part drawings
- Rapid prototyping with 3D printing

### **Created A Profitable Start-Up Business**

**2015-2016**

**Small scale hand-sewn clothing company**

- Researched and communicated with potential suppliers and wholesalers both domestic and overseas
- Completed the product development process from start to finish, including developing logos, finding a supplier, making a purchase order, assembling the product in house and, finally, marketing and selling the products to consumers

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**Volunteer Experience.**

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**Big White Snow Demo (Kelowna, BC)****February 2018, 2019****Assistant to the Salomon Rep**

- Assisted in providing binding adjustments, ski suggestions, and answering customer questions about Salomon's winter products over the weekend long demo event

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**Professional Affiliations.**

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**Engineers and Geoscientists of BC – Registered Engineer-in-Training (EIT)****Alpine Club of Canada – Student Member**

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**Activities / Interests.**

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**Backcountry Skiing** – Garibaldi Neve traverse in a day (40k), Spearhead traverse (35k)**Trail Running** – Ultramarathon at Big White ski resort (50k), Juan de Fuca (47k) self-supported in a day**Biking** – Okanagan Lake circumnavigation (280k), Courtenay to Victoria (200km) both in a day**Others** – Snowboarding, Mountaineering/Climbing, Camping, Surfing, Kendama.

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*\*References available upon request.*