

# William Zittlau

## B.ASc Mechanical Engineering

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<https://github.com/willzittlau>

<https://willzittlau.com>

Kelowna, BC

### Technical.

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**Languages** – Python, JavaScript ES6, HTML5, CSS

**Frameworks / Libraries** – Flask, Pandas, Selenium, Nuxt.js, Vue.js, Bulma.css, Tailwind.css

**Database** – PostgreSQL, Nuxt/Content API

**DevOps / Deployment** – Git/GitHub/Gitlab, Jira, Postman, Heroku, Netlify

**Software** –VS Code, Excel, Word, PowerPoint, Photoshop, Solidworks, Lightspeed, Windchill

### Education.

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**University of British Columbia**

2015-2020

**Bachelor of Applied Science – Mechanical Engineering**

- Graduated with Distinction
- Dean's Honor List in 3<sup>rd</sup> & 4<sup>th</sup> year

### Projects.

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#### Personal Sites

2020

**Personal Blog/ Portfolio using JAMstack.**

- Nuxt.js apps deployed to Netlify. Uses Nuxt/Content to read markdown files to generate post contents. Vue.js, JavaScript, HTML/CSS, Git/GitHub. Bulma for the blog and Tailwind for the portfolio

#### 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, BeautifulSoup), web scraping, data frame manipulation, asynchronous processing, Jinja2, HTML/CSS, Git/GitHub.

#### Skiing Forecast App

2020

**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, BeautifulSoup, Bokeh), web scraping, responsive graphs, JavaScript, 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, task-manager, web crawler, input validation + message flashing, Jinja2, HTML/CSS, Git/GitHub.

#### Engineering Capstone Group Project - Search and Rescue Drone with AI integration

2019-2020

**Modular add-on kit including HD camera, infrared camera, supplies delivery winch, AI processor**

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

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## Work Experience.

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### 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.

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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, Snowboarding, Mountaineering, Trail Running, Biking, Surfing.

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## Other.

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Class 5 Driver's License, Canadian Passport, CAA Avalanche Operations Level 1, First Aid, WHMIS

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*\*References available upon request.*