William Zittlau

B.ASc Mechanical Engineering

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https://github.com/willzittlau

https://willz.dev

Kelowna, BC

Technical.

Languages – Python, JavaScript ES6, HTML5, CSS

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

Database – PostgreSQL, Nuxt/Content API

DevOps / Deployment – Git/GitHub, Heroku, Netlify

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

Education.

University of British Columbia   2015-2020
Bachelor of Applied Science – Mechanical Engineering
- Graduated with Distinction
- Dean's Honor List in 3rd & 4th year

Projects.

Personal Site   2020
Personal Blog/Portfolio using JAMstack.
- Nuxt.js app deployed to Netlify. Uses Nuxt/Content to read markdown files to generate post contents. Vue.js, JavaScript, HTML/CSS, Git/GitHub.

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.

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, Beautiful Soup, 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)

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   **December 2013 - December 2016**
(West Kelowna & Peachland, BC)
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 Affiliations.

Engineers and Geoscientists of BC – Registered Engineer-in-Training (EIT)

Alpine Club of Canada – Student Member

Activities / Interests.

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

Other.

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

References available upon request.