

# Eamon Murphy

CIVIL ENGINEER

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## ABOUT

I enjoy cross-disciplinary pursuits and am always striving to learn new skills to broaden my perspective. I am deeply passionate about sustainability and environmental issues and am looking for a position where I can use engineering skills to produce solutions that are technically eloquent and socially responsible. I have a good understanding of many Civil Engineering disciplines and can work in a wide variety of fields. I am a dual Canadian / Irish (EU) Citizen. English is my native language and I speak French at a professional working proficiency level. I also have limited proficiency in Spanish.

## EDUCATION

I have a Bachelors of Engineering in Civil Engineering from the University of Victoria in British Columbia Canada. This program was designed from the ground up to be Canada's greenest civil engineering program and is very focused on sustainability. As part of my degree I completed 4 co-op's (internships) of 4 months each. I began my degree in September 2013 and finished August 2018. During my degree I held various positions within the Canadian Society for Civil Engineering University of Victoria branch including student advisor, I played a variety of team sports, and I provided photography for other clubs on campus.

## PROFESSIONAL EXPERIENCE

### **EDGE Sustainability + Operto [Formerly: Slickspaces Technologies INC]**

Vancouver B.C. — *Project Engineer* SEPTEMBER - DECEMBER 2017

I worked with an award winning Vancouver based startup using IOT connected devices ranging from thermostats to smart locks to increase security and energy efficiency for the home rental market. I held a multifaceted role where I provided; engineering support adapting consumer IOT technologies for commercial use within a LEED context, project management skills, and web design and front end development. I worked alongside EDGE a Vancouver based sustainability consulting company to ensure energy efficiency was a top priority in home rentals.

### **Ministry of Community, Sport, and Cultural Development**

Victoria B.C. — *Infrastructure Grant Analyst* JANUARY - APRIL 2017

I created an in-depth review of a grant assessment process by analyzing proponent responses with an emphasis on visual analytics using a self-made macro within Excel. In this post I gained an in depth familiarity with Microsoft Excel and data analysis within it, including how to effectively use VBA to gather information. I networked with clients across the province in a project management role showing effective organizational abilities. I also reviewed grants applying for sustainable development projects and provided technical feedback for these applications.

### **Indigenous & Northern Affairs Canada**

Whitehorse, YT — *Capital Project Engineering Student* MAY - AUGUST 2016

I worked with First Nations in the provision of safe and reliable potable water, and wastewater treatment. I worked with several clients to ensure timely progressions of civil engineering projects including; road resurfacing, housing stock development, septic field replacements, home waste collection, and riprap installation. I helped to award contracts, and provide comments on technical designs of proposed water facilities. I also created GIS maps for a civic remuneration. In this position I gained experience with sustainable community development, project management, and water and wastewater treatment.

## SOFTWARE

I am easily able to learn new digital tools and software and enjoy coding and technical programs. I have experience with; Microsoft Word, Excel, PowerPoint, Outlook, and Project Professional 2013. Adobe Photoshop & Lightroom. OpenStudio, EnergyPlus, Sketchup, AutoCAD Civil 3D, ArcGIS, Google Earth (Pro), QGIS, SYNCRO, AutoCad Autoturn, MATLAB, R, HTML, CSS, Python, Windows batch files, Bash Scripts. Operating systems including Ubuntu (Desktop/Server), Windows XP – 10, and macOS.

## PROJECTS

### Machine Learning HVAC Optimization

I researched machine learning and advanced statistical methods to accurately predict future HVAC demand profiles thereby reducing HVAC energy consumption for a large office building in Victoria B.C., using a dataset comprised of 2,100 timeseries spanning several years at sub-hourly resolution. This project gave me experience analyzing big data in Python within a sustainable building science context. I worked with support from the Energy Systems and Sustainable Cities research team based at the University of Victoria.

### University of Victoria – Civil Engineering Department Headquarters

I have academic experience performing a detailed building energy analysis for the planned extension of the current Engineering and Computer Science building to house the Civil Engineering Department at the University of Victoria. Analysis was performed using OpenStudio, Energy Plus, and SketchUp. Deliverables included presenting the analysis to a board in a visually digestible manner. I have proven in this project to be a strong team leader, and I have gained valuable insight into sustainable development and energy modelling.

### Capstone Project

I have Academic/Industry experience working on a capstone project detailing extensive renovations to a Department of Fisheries (DFO) owned Lighthouse Station. Our team produced a design which included; a resilience analysis for climate change impacts and earthquakes, a renewable power micro-grid using solar, wind, and wave energy systems, and extensive renovations to on-site residences. Deliverables included a final report, monthly progress updates, and a final presentation to a panel of industry judges.

## EXTRACURRICULAR ACTIVITIES

**Hiking** Completed various multi-day backpacking trips including, The West Coast trail and the Juan de Fuca trail (Vancouver Island), Hiking to numerous (10+) Alpine Club of Canada huts located in the Rocky Mountains, Camino of Santiago de Compostela (Northern Spain), The Grand Canyon ( Arizona, U.S.A. ) , The Chilkoot Trail (Yukon and Alaska), Tombstone Territorial Park (Yukon), Kluane National Park and Reserve (Yukon)

**Traveling** Explored many different cultures and countries including: Portugal, Spain, France, Monaco, Italy, Greece, Hungary, Slovakia, Czech Republic, Austria, Germany, Belgium, The Netherlands, Switzerland, The United Kingdom, Ireland, Panama, Costa Rica, Bolivia, México, Nicaragua, El Salvador, Belize, Aruba, Guatemala, The United States, Singapore, Indonesia, New Zealand, Cuba, as well as extensive travel within Canada.

**Photography** Accomplished photographer with images appearing in ELLE Canada; CBC Weather Network, Awesome Okanagan, Travel Yukon's Instagram, and several self-published photo books.

## REFERENCES

### Michael Driedger

EDGE – Operto  
Co-Founder, CEO  
1 778 713 0528  
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### Lee Johnson

Ministry of Municipal Affairs and Housing  
Infrastructure Resource Officer  
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