

# Riley Cambon

Vancouver, BC

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Portfolio: [www.rileycambon.me](http://www.rileycambon.me)

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## EDUCATION

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### University of Victoria

Bachelor of Engineering – With Distinction

Electrical engineering with a specialization in electronics design

Sept. 2013 – April 2019

Victoria, BC

### BCIT

2012 Canadian Electrical Code certification course

Feb. 2015 - May 2015

Burnaby, BC

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## HIGHLIGHT OF TECHNICAL SKILLS

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- Experienced in PCB design using Altium Designer
- Experienced in circuit design and PCB layout
- Knowledgeable in electrical test equipment and EMC testing/design considerations
- Embedded systems, C, C++, MATLAB, and Python programming knowledge
- Proficient in soldering and hot-air rework techniques
- Familiar with high-speed digital design considerations
- Antenna and RF knowledge
- Proficient in SolidWorks and AutoCAD
- Well versed in the Canadian Electrical Code

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## WORK EXPERIENCE

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### Electrical Designer Co-op

Avigilon

May 2017 – Dec. 2017

Vancouver, BC

- Worked on circuit design and PCB layout using Altium Designer
- Performed circuit debugging and high-speed signal integrity testing
- Conducted product verification and troubleshooting for EMC compliance
- Performed electrical modifications to prototypes and assisted with thermal testing

### Design Engineer Co-op

PBX Engineering

May 2016 – Aug. 2016

Victoria, BC

- Provided electrical consulting services for roadway and commercial projects
- Assisted with control systems coordination and planning
- Coordinated with government organizations and clients to verify design requirements
- Created quality management documents for drawing submissions

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**Electrical Designer/CAD Operator**  
Roy Campbell Ltd.Sept. 2015 – Dec. 2015  
Vancouver, BC

- Applied electrical theory to power distribution design for commercial buildings and projects
- Used AutoCAD for drafting electrical schematics, elevations, and layouts
- Assisted with project coordination and client meetings
- Performed lighting simulations and calculations

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**PROJECTS**

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**Signalight**

A gesture-controlled hand signal illumination wearable device for better hand signaling visibility while cycling. The PCBA was designed and built, and includes an AVR microcontroller, 3-axis accelerometer, single button interface, ambient light sensor, and lithium battery charger.

**Multi-effect DSP guitar pedal**

A portable guitar effects pedal with OLED display and user inputs. This Cortex-M4 based PCBA was designed and built, and includes additional SRAM, codec, input filter, and lithium battery charger. An algorithmic reverb was implemented on this hardware platform as a proof of concept using FreeRTOS.

**FallSafe**

A software defined radio-based fall detection device. FallSafe uses radar doppler shift and machine learning to classify falls for use in elderly care or hospital environments. This system was developed on the ADALM-PLUTO SDR. The machine learning and radar processing was programmed in MATLAB.

Please visit [www.rileycambon.me](http://www.rileycambon.me) for additional projects and details.

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**HOBBIES AND INTERESTS**

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- Product design and prototyping
- Sound recording and guitar
- Sustainable technologies
- IoT
- Triathlons

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**Clubs and Certifications**

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**UVic AERO**  
Electrical team

Sept. 2014 – Dec. 2018

**Amateur Radio Operator License**  
Advanced – VA7FLA

Dec. 2016

**Canadian Electrical Code Certification**

May 2015

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**REFERENCES**

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References available upon request.