Riley Cambon

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Portfolio: www.rileycambon.me

EDUCATION

University of Victoria Sept. 2013 – April 2019
Bachelor of Engineering Victoria, BC
Electrical engineering with a specialization in electronics design

BCIT Feb. 2015 - May 2015
2012 Canadian Electrical Code certification course Burnaby, BC

HIGHLIGHT OF TECHNICAL SKILLS

- Experienced with 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
- Familiar with high-speed digital design considerations
- Well versed in the Canadian Electrical Code
- Proficient in AutoCAD drafting

WORK EXPERIENCE

Electrical Designer Co-op May 2017 – Dec. 2017
Avigilon 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

Co-op Design Engineer May 2016 – Aug. 2016
PBX Engineering 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

Electrical Designer/CAD Operator Sept. 2015 – Dec. 2015
Roy Campbell Ltd. 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

PROJECTS

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** for additional projects and details.

HOBBIES AND INTERESTS

- Product design and prototyping
- Reading electronics textbooks and taking things apart
- Sound recording and song writing
- Triathlons

Clubs and Certifications

UVic AERO Sept. 2014 – Dec. 2018
Electrical team

Amateur Radio Operator License Dec. 2016
Advanced – VA7FLA

Canadian Electrical Code Certification May 2015

REFERENCES

References available upon request.