

WORK EXPERIENCE

Airbus Commercial Aircraft

July 2018 – Present

Research and Technology Intern

- Leading Flight Test Instrumentation development of a scale-model technology demonstration aircraft in Protospace, ensuring that all mission- and flight-critical data is collected, filtered, stored, and transmitted to the ground
- Developing long-range RF system and ground station, designing PCBs, manufacturing mounts, conducting system tests, and resolving every single electrical hardware or software issue
- Creating a new method to optimize PID gains for a braking and steering control system; by using reinforcement machine learning, tuning will be automated and more precise for future A320neo family aircraft
- Managing compliance program for a wireless monitoring technology and researching specifications, setting requirements, and analyzing A380 flight test data for defining design parameters; suggesting concepts which are undergoing reviews for possible patenting

Cascade Aerospace

January 2018 – April 2018

Engineering Co-op

- Applied engineering design principles to develop missionized aircraft modifications; met TCCA, FAA, EASA, and military airworthiness requirements for supplementary type certification
- Supported a countermeasure integration project by communicating engineering details from suppliers to the design team, and saved upwards of \$10,000 and weeks of manufacturing time through intuitive solutions

SWITCH Materials

April 2017 – August 2017

Electronics and Fabrication Co-op

- Assembled, tested, and troubleshooted embedded control circuits for photo-electrochromic smart glass, and ensured that automakers received fully functioning demonstration units
- Created passive RC and LC filters to adjust filtering and regulator feedback, so that the same control circuit could be used at different voltages, and prevented expensive redesign of the custom PCB

Connexus Industries

May 2016 – December 2016

Mechanical Designer

- Designed and prepared drawings of chains, sprockets, conveyors, and metal detectors, and gained competency of GD&T and mechanical design; automated CAD processes by learning how to code macros to reduce engineering time

SKILLS

Software: SolidWorks, Simulink, SCADA, Mission Planner, Eagle, Unity, DAQFactory, IAR Embedded Workbench

Electronics: UART, I2C, SPI, BTLE, WLAN

Languages: Python, JavaScript, Google Scripts, C, C#, HTML

Manufacturing: Laser-cutter, waterjet-cutter, metalworking, PCB SMD assembly

EDUCATION & CERTIFICATIONS

University of British Columbia

2014 – Present

BASc Mechanical Engineering, Mechatronics Engineering Option

Transport Canada

2016 – 2019

Special Flight Operations Certificate, Restricted Complex

Industry Canada

2017

Amateur Radio Operator Certificate, Basic with Honours

AWARDS & ACHIEVEMENTS

Unmanned Systems Canada Competition – 3rd place

2018

Garreth Ewan Thomas Memorial Award (community leadership)

2017, 2018

Lloyd Scott Memorial Award (passion for learning)

2017

UBC Undergraduate Student Academic Achievement Award

2017

Eric P. Newell Leadership Award in Engineering

2016

ACTIVITIES & INTERESTS

Geopolitics | Contemporary and legacy, military and dual-use technologies | Virtual and augmented reality
Airplanes and aviation | Sea kayaking, backcountry hiking, bouldering | Taekwondo