

WORK EXPERIENCE

Airbus Commercial Aircraft

July 2018 – Present

Research and Technology Intern

- Leading Flight Test Instrumentation of an advanced wing-technology demonstrator drone; developing long-range RF system and ground station, designing PCBs, manufacturing composite parts, conducting system tests, and troubleshooting all electrical hardware or software issues
- Developing reinforcement machine learning algorithms for a braking and steering control system feedback loop, determining ideal PID gains for A320 family integration
- Managing compliance program for a wireless monitoring technology by researching specifications, setting requirements, and analyzing A380 flight test data for defining design parameters; suggesting new concepts which are undergoing reviews for possible patenting
- Supporting Digital Transformation Initiative to incorporate VR and AR into Airbus processes for training and operations

Cascade Aerospace

January 2018 – April 2018

Engineering Co-op

- Applied engineering design principles to develop missionized modifications for civilian and military aircraft, meeting TCCA, FAA, EASA, and military airworthiness requirements
- Managed 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 PCB control circuitry prototypes for vehicle smart glass, gaining experience with passive filtering, embedded systems, and SMD components like resistors, op-amps, and FETs
- Reported to lead product development engineer and communicated engineering updates in a small R&D setting

Connexus Industries

May 2016 – December 2016

Mechanical Designer

- Designed and prepared production drawings of chains, sprockets, conveyors, and metal detectors, gaining competency of 3D CAD and mechanical design
- Modified macros by learning how to code in VBA, increasing productivity while decreasing 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, PCB assembly, CNC machining, composites

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 | Planespotting | Sea kayaking, backcountry hiking, bouldering | Taekwondo