Raymond Yu

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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 the braking and steering control system on A320neo family aircraft; by using reinforcement machine learning, tuning will be automated and more precise
- 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, ensuring 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, preventing 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, gaining competency of GD&T and mechanical design; automated CAD processes by learning how to code macros in VBA to reduce engineering time

SKILLS

Software: SolidWorks, Simulink, SCADE, 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 | Planespotting | Sea kayaking, backcountry hiking, bouldering | Taekwondo