Raymond Yu

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WORK EXPERIENCE

Airbus Commercial Aircraft
July 2018 – Present
Flight Physics and Landing Gear 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

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 liaising between suppliers and the design team, and saved upwards of $10,000 and weeks of manufacturing time by finding design conflicts

SWITCH Materials
April 2017 – August 2017
Electronics and Fabrication Co-op
- Assembled, tested, and debugged 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

SKILLS

Software: SolidWorks, Simulink, SCADE, Mission Planner, Eagle, Unity, DAQFactory, IAR Embedded Workbench
Electronics: UART, I2C, SPI, BTLE, WLAN
Languages: Python, MATLAB, JavaScript, Google Scripts, C, C#, HTML
Manufacturing: Laser-cutter, waterjet-cutter, CNC machines, 3D printers, 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