

Austin Rye

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EDUCATION	BEng in Electrical Engineering, Carleton University CGPA 11.0/12.0 (A) Deans' Honour List 2016 - Present Expected Graduation June 2021	Sep 2016 - Present
EXPERIENCE	RF and Wireless Systems Engineer <i>RCMP Technical Operations</i> <ul style="list-style-type: none">Developed a full-stack web application using Django/Flask frameworks with back-end in Python and SQLite and front-end in JavaScript, HTML and CSSDeveloped web servers in Linux using Python and Bash scripts by configuring networking systems and setting up parallel processes and threadingReverse engineered an SDR board using a Logic Analyzer to communicate through serial and manipulate the hardwareDeveloped wireless systems in LTE, WCDMA, GSM, GPS and WIFI by setting up and testing antenna systems, and measuring and characterizing RF signals using Spectrum Analyzers, VNAs, and Oscilloscopes	Sep 2018 – Apr 2019 <i>Orléans, ON</i>
PROJECTS	Electrical Engineering Design Lead <i>Carleton Planetary Robotics Team</i> <ul style="list-style-type: none">Designed, built, and programmed a Mars Rover to compete in international competitions which include retrieval and delivery, equipment servicing, autonomous traversal, etc.Designed the power system including the battery, emergency stop relay, regulators, protection circuits, and microcontroller breakoutProgrammed a tracking system for the antennas to track the Rover direction and locationDesigned PCBs using Altium Designer, and soldered and wired components onto the PCBsTested and troubleshooted PCBs and microcontrollers using multimeters and oscilloscopes Computer Systems Engineering Member <i>CUinSpace Rocket Engineering Team</i> <ul style="list-style-type: none">Designed, built, and programmed a high-powered Rocket to compete in international Rocket altitude competitionsProgrammed ARM microcontrollers in embedded C to control and measure various sensors on the RocketDesigned an RF board for communicating between the Rocket and the ground base station Simon Says <i>Independent Project</i> <ul style="list-style-type: none">Designed a Simon Says game using a microcontroller with button control and an interactable LCD displayProgrammed an AVR microcontroller in embedded C using the SPI protocol	Sep 2016 - Present <i>Carleton University</i> Sep 2018 - Present <i>Carleton University</i>
SKILLS	Languages – C, C++, Python, Java, C#, Bash, SQL, JavaScript, HTML, CSS, Assembly, Verilog Systems – Linux, AVR Microcontrollers, Arduino, Raspberry Pi, Windows Software – GIT, LTspice, Logisim, MATLAB, Altium Designer, Eagle Bilingual – English and French	