Austin Greisman

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Professional Summary

Robotics and AI MASc Candidate at Queen's University in Electrical Engineering. Has experience in multiple languages including C/C++, MATLAB, and Python. Expert in building custom hardware. Responsible for managing over $200,000 OPEX / CAPEX budget for team at Ericsson. Has won multiple hackathon's due to determination, creative nature, and technical skills. Managed, created, and designed custom LTE enabled Drone for Rogers on behalf of Ericsson as well as Augmented Reality goggles for mission critical applications.

Skills

- Skilled Programmer in C, C++, Arduino, MATLAB, Python, SQL, VBA, SystemVerilog, and Bash
- Experienced in Java, VHDL (Altera Quartus), and Assembly
- Highly skilled at designing, simulating and soldering circuit boards in multiple tools
- Skilled with diagnosing and repairing computer hardware

Education

MASc Thesis Candidate, **Queen's University** (Kingston, ON) September 2019 – April 2021

- Accelerated Electrical Engineering Graduate Program
- Vector Scholarship in Artificial Intelligence Recipient 2020-21 ($17,500)

Supervisors: Dr. Keyvan Hashtrudi-Zaad, Co-director of BioRobotics Research Laboratory &
Dr. Joshua Marshall, Interim Director of InGenuity Labs Research Institute

- To develop urban and highway lane sensing technology for autonomous vehicle localization in all weather conditions.

Electrical Engineering with Professional Internship, **Queen's University** September 2015 – June 2020

- Dean's Scholar (>3.5 cumulative GPA)
- Received Steve And Irene Groch Entry Scholarship Award for my creativity/entrepreneurial spirit ($6,700)
- Final year project Capstone (Smart Thermos) finalist out of 35 teams.

Relevant Courses

Third Year	Fourth Year
- App. Of Electromagnetics *(Antenna Physics)*	- Autonomous Vehicle Control (Non-Linear Control)
- Electronics II *(Circuit Design)*	- Robotics (Mechatronics)
- Microprocessor Systems *(VHDL, Embedded Systems)*	- Machine Learning & Deep Learning, A.I & Interactive Systems (AI & DNN)
- Electric Machines *(Three Phase Circuits)*	- Power Electronics (Converter Design)

Relevant Experience

ECE Manager of Queen's Space Engineering Team, Queen's University September 2019 – May 2020

- Managed and directed over 60 Queen's undergraduate and graduate students to develop and perfect a Mars Rover.
- Retention rate of the ECE team rose 6-fold, and the number of projects in concurrent development doubled due to the my managerial and planning abilities.
- Managed 12 electrical and computer projects to ensure completion before the yearly competition in Hanksville, Utah, in May of 2021.
- Personally developed and created Power Monitoring system and Object Avoidance algorithm for competition.

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Innovation Garage Member, Ericsson Canada May 2018-August 2019

- Drove 2019 internal Hackathon, participation rose by 300% from previous year due to my creative advertising and managerial skill.
- Developed IoT Augmented Reality headset for delivering mission-critical communications for firefighter in the Ericsson Innovation Garage, winning the 2018 internal Hackathon.
- Created from scratch, a proof-of-concept LTE Enabled Drone with beyond-line-of-sight capabilities for public safety applications. Managed team of four employees to meet project timeline.
- Goggles and Drone caught the interest of Rogers Communications, where the AR headset and Drone were showcased at Collision 2019, OCE Discovery, and at Elevate Techfest in Toronto.
- Have personally demoed both creations to multiple C- Level executives from many Telcom and technology companies including, Bell, TELUS, ROGERS, Tbaytel, Volvo as well as government officials.
- Innovations have directly correlated to new business partnerships with Ericsson.

Digital Hardware Design Intern, Ericsson Canada December 2018-August 2019

- Followed agile development style to meet project deadlines.
- Redesigned 20-layer PCB around main Ericsson radio ASIC to reduce size to 14 layers. Design will be used for all radios that are designed at the Ottawa site that use this ASIC.
    - Cadence Allegro PCB designer and PowerDC were used for edits to board file and simulating DC power distribution, respectively.
- Received radios from carriers that had been damaged to debug and diagnose to see if they were systematic issues with hardware design.

FPGA UVM Verification Intern, Ericsson Canada May 2018 - December 2018

- Created and tested the next generation of LTE/5G radio technology (AIR3246 B66).
- Created multiple SystemVerilog UVM testbenches to increase functional coverage.
- Developed technique in python of automatically testing FPGA boards, saving multiple teams 100+ hours of work.
    - I was rewarded with internal award points from superiors for my method.
- Responsible for code coverage of main Xilinx FPGA, increasing coverage from 37% to 80%.

Electrical Member of Queen's Space Engineering Team, Queen's Engineering Society January 2017-May 2019

- Due to my skill with electrical circuits, was tasked with designing PCBs in Eagle to aid in the optimization and organization of the Rovers electrical wiring and design.
- Programmed a SPI communication interface to interpret the exact position of the arm using absolute encoders.
- Was asked attend University Rover Challenge in Utah which lead to team placing second in Canada.
- Developing and designing code using JavaScript to control the main robotic arm on the Mars Rover.

Co-Op Developer, TD Securities, Toronto ON May 2017 – September 2017

- Worked with other developers to improve and maintain TD Securities FX Trading book of records system.
- Created bash shell scripts using RESTful server architecture to automate and manipulate database tasks to improve the productivity and robustness of the trading system.
- Created Java programs for the development team to increase efficiency while building all projects requiring properties files
- Worked with Slash, Confluence, and Jenkins
- Used Murex as vendor product base for the trade booking system

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Summer Intern, All Weld Company Limited, Scarborough ON May 2016 – September 2016

- Updated key company database system using VBA in Microsoft Access and SQL
- Developed a quoting system for the sales department. Streamlined inefficient processes involved in receiving, editing and reporting quotes from customers.
- Developed the Engineering Management System. Allowed management to track the Engineer's progress on work orders, increasing their overall productivity and efficiency.

Teaching Assistant, Queen's University Engineering September 2016 – December 2017

- Nominated for teaching award by students
- Assisting the professor in first year Robotic C, C, and MATLAB programming labs/studios by, answering questions, providing examples, and explaining concepts to the students.
- Constantly receive praise from students for my simple and quick explanations.
- Teaching the introductory programming course for 3 semesters.

Computer Repair Business, Self Employed January 2013 – December 2017

- Repair a range of computer problems, from eliminating viruses to hardware failures.
- Use my knowledge of different operating systems to recover lost passwords on customer's computers.
- Business growth has been a result of repeat customers and recommendations.

Extra-Curricular Experience

Mentor, FIRST Robotics Canada September 2018 – December 2018

- Mentored a local Ottawa team (RoboRavens) to implement machine vision capabilities onto their robot for the upcoming competition.
- Taught students UDP/TCP networking techniques for real-time video streaming.
- Was informed after the competition that his help was crucial for the team's success.

Member of Queen's Network Security Team, Queen's University Engineering September 2017 – April 2018

- Studying and discussing network security under the guidance of computer engineering faculty.
- Practicing network security techniques in a secure custom server, which includes:
    - Scanning for computers and determining if they are vulnerable and exploiting these computers if possible.
    - Performing post-exploitation techniques to ensure accesses at a later time.

Engineering Wellness Center Supporter, Queen's University Engineering September 2017 – April 2018

Vice President, Queen's Electrical and Computer Engineering Society September 2017 – April 2018

- Enhanced and ran the New Queen's ECE Banquet. As a result, turn out and revenue for event increased by over 500% from the previous year.
- Tasked with improving study area for ECE students. Was given constant praise by students and staff for drastic improvements.
- Managed a $27,000 budget to improve the ECE facility and workspace through the BED fund.
- Was presented two awards from the ECE department for my work over the year.

Executive on Queen's Global Energy Conference, Queen's Engineering Society September 2016-May 2017

- Using my engineering knowledge and creativity, I promoted the ideas and values of the energy conference. This included:
    - Creating intricate posters and banners while helping with the design of various events.
    - Contributing ideas into how the conference should be developed and executed.

Achievements and Certifications

2020	Vector Scholarship in Artificial Intelligence Recipient 2020-21
2020	Dean's Scholar Award for continued outstanding academic performance for all four years of study
2020	Capstone (Smart Thermos) project finalist out of 35 teams.
2019	Completed Deep Learning Specialization from deeplearning.ai
2019	First Aid & CPR/AED Level C Certificate
2018	Won internal Ericsson Hackathon for thermal camera augmented reality device
2018	Awarded Science '44 Memorial prize for incredible extra-curricular involvement
2018	Major League Hacking Finalist Award at QHacks Hackathon
2018	Voice of Change Award & Outstanding Service Award from ECE Faculty and Students
2017	Nominated for Christopher Knapper Teaching Award for Excellence in Teaching
2017	Obtained safeTalk mental health awareness certification
2011	Traveled to Korea to compete for Canada in an International Taekwondo Competition
2009	Attained my 3rd Degree Black Belt in Taekwondo

References Available Upon Request