

# Alex McKinnon

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## EDUCATION

### Queen's University

BASc in Computer Engineering  
Candidate  
Software Engineering Stream  
Expected Grad. Nov. 2021

## SKILLS

### Programming

#### Experienced:

C/C++, Python, Unix Bash

#### Moderate:

Arduino, Java, MATLAB,  
Dart, Nios II Assembly

#### Beginner:

Swift, Verilog,  $\LaTeX$

### Web Technologies:

HTML5, CSS, Bootstrap,  
AWS: EC2, Cloudfront, S3

### Tools:

Cygwin, Eclipse, Visual Studio,  
Xcode, OpenCV, SDL,  
Adobe CC: Lr, Ps, Pr, & AE,  
MS Office & MS Project

## COURSEWORK

Entrepreneurship Foundations,  
Engineering Design & Practice,  
Computer Architecture,  
Data Structures & Algorithms,  
Microprocessor Interfacing &  
Embedded Systems  
Discrete Mathematics,  
Machine Vision,  
Machine Learning,  
Database Management,  
Operating Systems,  
Software Quality Assurance

## AWARDS

Order of the Purple Knight,  
Duke of Edinburgh Silver Level,  
Lang Family Scholarship,  
Ray Kingsmith Scholarship

## PROJECT EXPERIENCE

### Goose Deterrent Robot - Capstone Project

February 2020 – Present

Final Year Capstone Team Member

Kingston, ON

- Developing an multi terrain robot to ethically deter Canada geese.
- Using Azure Cognitive Services machine vision to "target" geese.
- Responsible for training the recognition model on Azure's cloud.

### CTRLGate - Software Startup

September 2017 – September 2018

Co-founder

Kingston, ON

- Co-founded a start up company focused on providing campus access control software for gated communities.
- Approached and on-boarded to an incubator program at the Queen's University Innovation Center.
- Built up a diverse advisory board while learned the ins and outs of starting a business in the tech & security sector.

### Autonomous Targeting Defense System

Jan 2017 – Apr 2017

Arduino Programming and Electronics

Kingston, ON

- Assembled a motorized mount for a semi automatic paintball gun to be mounted onto a semi-autonomous sail boat.
- Responsible for the electronics and coding of the Arduino controller.

## WORK EXPERIENCE

### Engineering Society of Queen's University

February 2020 – Present

Director of Information Technology

Kingston, ON

- Reformed the IT department to address unmet society needs.
- Established an ITops Security Team, new server infrastructure, self-serve managed hosting platform, reliable HR software updates, and an online IT help desk.
- Oversees multiple software development & IT Operations Teams.
- Introduced an internal knowledge base & comprehensive training modules to combat information loss for our annual position turnover.

### Queen's Residence Technology

April 2019 – September 2019

Support and Network Technician

Kingston, ON

- Responsible for maintaining and repairing network connections in every residence room on campus ( $\approx$  4000). Gained a working knowledge of Queen's network structure, VLANS & related tech/protocols as they are applied in its large enterprise network.

### Uhaul Moving and Storage

Jun 2017 – Aug 2017

Customer Service Representative

Calgary, ON

- Worked directly with customers to rent trucks, equipment & services that best suited their needs.
- Qualified to perform level one & two inspections on all trucks & trailers.