

# Alexander Kuznetsov

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## EDUCATION

### QUEENS UNIVERSITY

BASIC ENGINEERING PHYSICS,  
COMPUTING OPTION, FIRST CLASS  
HONOURS

Grad. Apr 2018 | Kingston, ON

Cum. GPA: 3.99/4.30

Dean's List (All Semesters)

Principal's Scholarship

Toronto-Dominion Bank Higher Education  
Award

Herman K. Walter Award

Camelford & White Memorial Entrance  
Award

Maurice G. Corbett Entrance Bursary In  
Applied Science

Queen's Admission Award

### WEST CARLETON S.S.

Grad. June 2014 | Ottawa, ON

Silver Medal Winner (90%+ average)

Grade 11 Academic Excellence Award  
(highest average)

University of Toronto National Book  
Award

### UNDERGRADUATE

Software Algorithms and Development

Machine Vision and Image Processing

Computer Graphics

Computational Engineering Physics

Digital Systems

Electronics

Robotics

Engineering Practice

Advanced Mechanics

Advanced Mathematics

Classical and Modern Physics

Laboratory Physics

## SKILLS

### PROGRAMMING

C/C++ • Java • C# • Python

Protocol Buffers • Machine Learning

Android • JavaScript • Matlab

HTML • CSS

### ENGINEERING

Collaboration • Presentations

Documentation • Organization

Learning • Analysis • Idea Generation

Idea Evaluation • Time-management

## EXPERIENCE

### GOOGLE | SOFTWARE ENGINEER

Sep 2018 - Present | Mountain View, CA

- As part of Mobile Vision, developed ML models to improve image and video processing performance, integrated models into apps, and contributed to internal image and video processing pipeline
- As part of Android Location team, developed internal library to simplify WiFi-RTT ranging APIs, developed and launched WifiRttScan app, and analyzed effect of geometry on position error

### CIENA | EMBEDDED SOFTWARE DESIGNER CO-OP

May 2017 - Sep 2017 | Ottawa, ON

- Designed and implemented control layer device drivers for optical equipment
- Wrote regression testing software of optical equipment (monitoring hardware pin behavior, testing optical gain, etc)
- Extensive use of low-level C and VxWorks RTOS

### CIENA | SOFTWARE ENGINEER CO-OP

May 2016 - Sep 2016 | Ottawa, ON

- Reverse engineered a routing table and wrote parsing software to build a list of optical services through the United States
- Analyzed performance of smart algorithms in covering optical services
- Expanded telecommunications equipment APIs used in planning software
- Worked with C, C#, .Net, Visual Basic, Matlab, agile development methodology and git

### CONNECTIV8 CORP. | IT TEAM EXECUTIVE

May 2013 - Present | Kingston, ON

- Student-run startup aiming to solve issues with the education system by connecting students with businesses to work on projects
- IT/Web Development Team: HTML/CSS, Javascript, C#, AngularJS

## PROJECTS

### IMAGE CONVOLUTION AND NOISE REDUCTION

November 2017

Using 2 dimensional discrete Fourier transforms to efficiently apply convolutions and remove periodic noise from images.

### AUTONOMOUS ROBOT FOR SNO+ EXPERIMENT

Sep 2017 - April 2018

Designing an autonomous robot for Nobel winning SNO Lab. Position is triangulated with cameras and combined with other sensor measurements for state estimation.

### CRYPTOCURRENCY ARBITRAGE BOT

May 2017

A bot written in C++ that locates cryptocurrency arbitrage opportunities on an exchange by finding negative weight cycles.

### BUYBOT: KINGSTON CITY HACKS FINALIST

Nov 2016

Using a machine learning API, natural language processing, and Google's search API, created a Telegram bot that returns an Amazon page from a picture of a product.