

# TYLER PHARAND

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## EDUCATION

### Bachelor of Electrical Engineering, Co-op

June 2018

McMaster University, Hamilton, ON

- (2018) Graduated on Dean's Honour List
- ★ (2018) Awarded 2<sup>nd</sup> Place, Electrical Engineering for Final-Year Capstone Project (\$300)
- (2013) McMaster Honour Award, Scholarship (\$750)

## WORK EXPERIENCE

### Distribution Asset Management Intern

May 2016 - Aug 2017

Hydro One Networks Inc., Toronto, ON

- Performed power system simulations using CYME to identify distributed generators' impact to the system (voltage fluctuation, as well as short-circuit and thermal capabilities)
- Worked closely with customers for distributed generation projects. Discussed transformer and generator technical specifications, project size, layout, etc.
- Prepared business case summaries, scope of works, budget distribution forms for various projects
- Planning of capital and maintenance investments to improve reliability and system capacity
- ★ Developed an Excel tool in VBA to speed up document updates to the List of Station Capacity. The tool allowed this particular document to be updated in a fraction of the original time by automating and streamlining the original process

### Customer Care Representative

July 2015 - Sept 2015

Contemporary Security Canada (CSC), Brampton, ON

- Managed on-site security workers' shifts, documented absences and other anomalies
- Collaborated closely with other departments to resolve issues (payroll, scheduling conflicts, etc.)

### Machine Operator

June 2014 - Sept 2014

Ice River Springs Water Co., Feversham, ON

- Cooperated with a small team on an assembly line, managing time to perform various tasks
- Ensured that stages of production flowed smoothly, troubleshooting faults in machinery as needed.
- Performed quality assurance tests on products (torque measurements, recording impurities and product output)

## TECHNICAL SKILLS

### Programming Languages

- Working proficiency in:  
Python, C, Java, Swift, VBA

### Web Development

- Working Proficiency in:  
HTML5/CSS3, JavaScript/jQuery
- Elementary Proficiency in:  
SQL, PHP

### Networking

- Strong background in computer networking and communications through related courses.  
(EE4DN4, Advanced Internet Communications; EE4DK4, Computer Communication Networks)

### Operating Systems

- Highly familiar with MacOS and Windows.
- Comfortable with Unix shell interface.

### Miscellaneous

- Experience with machine learning; used TensorFlow to train a neural network to recognize handwritten numerals.

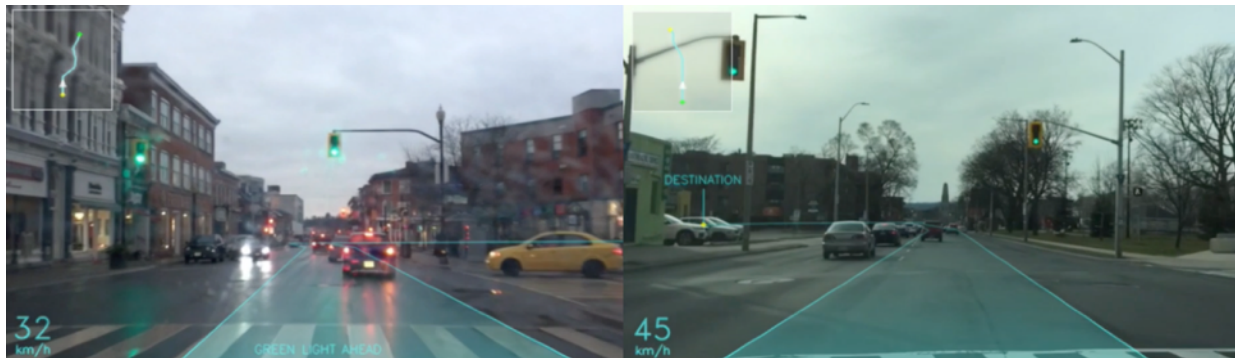
## PROJECTS & EXTRA CURRICULAR

### Capstone (Final Year Project) - Second Place

April 2018

McMaster University, Hamilton, ON

- Developed an augmented-reality GPS navigation system. The program fetched route data from the Google API and made use of OpenCV to perform image processing tasks. The primary function of the program was to overlay the route and other information on top of a video feed in order to create a heads-up display with relevant navigation data. Future steps would be to integrate the program into an AR headset, or display the program output on the vehicle's windshield
- Utilized neural network for stop sign detection. Image processing functions for Red Light warnings
- Software Components: Python 3.0, OpenCV, Google API, Various Python Libraries
- Hardware Components: Arduino Uno, GPS Module, Magnetometer/Accelerometer Module
- ★ My team and I were awarded second-place in Electrical Engineering as well as \$300 in prize money



### YHACK 2015 (Hackathon)

Nov 2015

Yale University, New Haven, CT

- Worked in a team of three to develop a web-based travel application (JavaScript, Bootstrap) which presented tailored travel destinations to the user in a visually compelling, swipe-based interface.
- Responsible front-end design, and back-end integration of the application.
- The Hackathon was only 36 hours, therefore time-management and goal-setting was key.



### Student Member

September 2013 - June 2018

Ontario Society of Professional Engineers (OSPE)

### Student Member

Sept 2015 - April 2016

McMaster Student Union Charity Ball Committee

### Student Member

March 2015 - April 2015

Engineers Without Borders, McMaster Chapter

### Programmer and Graphic Designer

April 2014 - April 2015

McMaster Undergraduate Journal of Law and Politics