

## SKILLS

**Languages:** Java, C#, C++, R, Python, JavaScript/TypeScript, Ruby, HTML/CSS  
**Web:** React, Redux, Knockout, Node, Meteor, Rails  
**Mobile:** Android, React Native

**Cloud:** Azure, AWS  
**DB:** SQL, MongoDB  
**Machine Learning:** Tensorflow, Keras, Scikit-Learn, Weka  
**Visualization:** Shiny, Tableau, Excel

## EXPERIENCES



### Ivey Business School - Research Assistant

Aug 2018 - Present

*Supervised by Dr. Y. Shi*

London, ON

- Writing python scripts for transposing and aggregating unstructured financial data into more human-readable tables and visualizations.



### Microsoft - Software Engineering Intern

May 2018 - Jul 2018

*Azure Cloud Geneva Monitoring Team*

Redmond, WA

- Designed and launched an end to end service based on serverless cloud computing infrastructure that allows for designated response individuals to configure custom automation workflows involving monitoring and incident management enrichment actions such as drill down recommendations, alert emails, and daily health status monitoring; projected to free up over 30,000 engineering hours per year.
- Created an API to allow for the automation framework to be extensible, allowing actions from third party providers to be added seamlessly.



### Magnet Forensics - Software Developer Intern

May 2017 - Aug 2017

*Software Tools and Support Team*

Waterloo, ON

- Developed features for filtering data, including the ability to add labels and outlier emission; resulted in a more streamlined workflow for investigators dealing with increasingly large data sets; decreased average time to build a case by an estimated 12%.
- Built a custom dashboard visualization framework allowing users to aggregate data from multiple sources.



### Cambridge Brain Sciences - Student Developer

Jan 2017 - Apr 2017

*Puzzle Behaviour Team*

London, ON

- Recognized a need to make academic neurological research sampling more scalable and ported puzzles to a more modern tech stack; increased weekly visits from 1,000 to 3,000.



### Western University - Undergraduate Researcher

Nov 2015 - Aug 2016

*Innovation Centre for Information Engineering, Supervised by Dr. X. Wang*

London, ON

- Developed machine learning models for indoor locationing and activity recognition based on WiFi signal strengths and implemented a technique for mitigating the impact of phone sensor differences; resulted in location recall and precision of 92% and 88%, and activity recall and precision of 76% and 81%.

## PUBLICATIONS & PROJECTS

### A Novel WiFi-based Indoor Localization System

2017

- IEEE CSCWD, DOI 19.1109/CSCWD.2017.8066713

### NHL Prediction Models and Visualizations - <http://garyshen.me/#hockey>

2017

- Research on leveraging machine learning models for predictive and descriptive data driven hockey analytics.

### Mitigating Sensor Differences for Phone-based Human Activity Recognition

2016

- IEEE SMC, DOI 10.1109/SMC.2016.7844783

### Smart Bed Monitoring System

2015

- Non-invasive system for monitoring sleep related health by applying machine learning to pressure sensor data.

## EDUCATION

### Western University (BESc) and Ivey Business School (HBA)

Sep 2015 - Apr 2020 (Expected)

*Software Engineering (94% Average) and Business Administration (85% Average)*

- **Awards:** 2017 Ivey Alumni Association Toronto Chapter HBA Award (\$24,000), 2015 National President's Scholarship (\$50,000), 2016 NSERC Undergraduate Student Research Award (\$6000)
- **Activities:** Ivey Technology Club Co-president, Mustang Capital Quantitative Trading Analyst