

# GARY SHEN

garyshen.me

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## Skills

**Languages:** Java, C#, C++, SQL, JavaScript, HTML/CSS, Ruby/Rails, R, Assembly, VHDL

**Technologies/Concepts:** Android, React.JS, Redux, Meteor, MongoDB, Shiny, REST, Ajax, Supervised Machine Learning

## Education

### Ivey Business School - HBA Candidate

- 2017-2020 (Expected)

### Western University - BESc Candidate

- 2015-2020 (Expected)
- 94% Average, 3.9/4.0 GPA
- Dean's Honor Roll 2016, 2017

## Publications

### A novel WiFi-based indoor localization system - IEEE CSCWD 2017

- Shen, G., Yin, X., Wang, X., Shen, C.

### Mitigating sensor differences for phone-based human activity recognition - IEEE SMC 2016

- Yin, X., Shen, G., Wang, X., Shen, W.

## Awards

Ivey Alumni Association Toronto Chapter HBA Scholarship (\$24,000) - 2017

NSERC Undergraduate Student Research Award (\$6,000) - 2016

Top First Year Design Project - 2016

National President's Scholarship (\$50,000) - 2015

## Activities and Interests

Western Founders' Network VP Education - 2016-Present

Algo Trading Club Platform Developer - 2016-2017

Thames Valley Science/Engineering Fair Sponsorship Head and Judge - 2015-Present

Interests: Hockey, Golf, Ping Pong, Pro Sports Analytics, Board Games

## Experience

### Magnet Forensics - Software Developer Co-op ..... May 2017-Aug 2017

- Full-stack development for a performance metric tracking dashboard that aggregated development and testing data; resulted in a more streamlined internal development workflow and a web application that is used by over 50% of employees
- Designed and implemented multithreading functionality and a new previewing feature for the product licensing tool, improving the speed of the license renewal and removal process by over 25%
- **Technologies used: React.JS/Redux, MySQL, C#, Python, Batch, REST**

### Cambridge Brain Sciences - Student Developer ..... Jan 2017-Apr 2017

- Modernized cognitive testing suite by porting puzzles from flash player to HTML5/JS, increasing users by over 200% with launch of new website
- Constructed mathematical model for standardizing scores from new versions to be compatible with prior data, allowing over 100,000 data entries to remain relevant
- **Technologies used: Ruby on Rails, SQL**

### Western University - Undergraduate Researcher ..... Nov 2015-Aug 2016

- Innovated and prototyped an indoor locationing technique based on a self-developed WiFi signal strength propagation based model; resulting locationing method had a theoretical pre-deployment efficiency gain of a factor of 5 compared to the current standard for indoor locationing
- Applied machine learning methods to a human activity recognition app to improve recall from 76% to 92% and precision from 84% to 88%
- **Technologies used: Android, Java, REST, Weka, MATLAB**

## Progress

### IOU

In Progress

- A web application for bill splitting and small person to person payments
- **Technologies used: Meteor, MongoDB, Paypal API**

### NHL Prediction Model

2017

- A machine learning model for predicting player stats and NHL results
- **Technologies used: R**

### Group Tools Chatbot

2017

- A Facebook messenger chatbot adding several features to group chats (gold star tracker, randomizer, and reaction picture sender)
- **Technologies used: NodeJS, Messenger Platform API**

### BikeSafe for V2V

2016

- A smartwatch app detecting cyclists' hand signals for the purpose of future vehicle to vehicle communication protocols
- **Technologies used: Android, Java, Python, REST, Pebble API**

### Smart Bed Monitoring System

2015

- A machine learning based system for detecting bed-related scenarios and monitoring sleep patterns
- **Technologies used: Java, Zigbee, Weka**