

GARY SHEN

garyshen.me

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Skills

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

Technologies/Concepts: Android, ReactJS, 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
- Dean's Honour Roll 2016, 2017

Publications

A Novel Wifi-Based Indoor Localization System - IEEE CSCWD 2017

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

Mitigating Sensor Differences for Phone-Based Human Activity Recognition - IEEE SMC 2016

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

Team Canada International Science and Engineering Fair Top 30 - 2015

Canada Wide Science Fair Excellence Awards and Resource Challenge Award (\$9,700) - 2011-2015

Activities

Western Founders' Network VP
Education - 2016-Present

Algorithm Trading Club Platform
Developer - 2016-Present

TVSEF Sponsorship Committee Head and Judge - 2015-Present

Experience

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

- Created new dashboard page for monitoring regression of certain job metrics over builds of product.
- Added new view to dashboard providing product owners/dev managers with a quick summary of the health history of certain artifacts
- Added new previewing feature to licensing tool, improving efficiency of license renewal process by 15%
- Implemented custom artifact to help forensic investigators retrieve data stored by the Waze Android app
- Fixed various bugs in several products
- **Technologies used: ReactJS/Redux, SQL, C#, Python, Various APIs**

Cambridge Brain Sciences - Student Developer Jan 2017-Apr 2017

- Ported cognitive web puzzles from flash player to HTML5 and JS
- Created model for standardizing scores from new versions to prior data
- Created test suite enabling automation of unit tests
- **Technologies used: Ruby on Rails, SQL**

Western University - Student Researcher Nov 2015-Aug 2016

- Designed and prototyped new indoor locationing technique based on a self-designed signal strength propagation based model, with a theoretical pre-deployment efficiency gain of over 6 times compared to current standard for indoor locationing
- Applied machine learning methods on human activity recognition app to improve detection accuracy from 76% to 92%
- **Technologies used: Android, Java, REST, Weka, MATLAB**

Additional Projects

NHL Prediction Model

In Progress

- Created a model using the perceptron machine learning algorithm for predicting results of NHL games and the season as a whole
- Produced a single comparable metric for evaluating all aspects of a player's contributions towards wins
- Correlated various advanced stats to fantasy hockey points
- **Technologies used: R**

Group Tools Chatbot

2017

- Created 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

- Designed and implemented a system to better integrate cyclists in vehicle to vehicle communication protocols for future autonomous car systems
- Used a machine learning approach to calibrate the recognition of arm signals and make appropriate decisions for surrounding vehicles
- **Technologies used: Android, Java, Python, REST, Pebble API**

Smart Bed Monitoring System

2015

- Applied machine learning tools to implement and train a model based on supervised force sensor data to detect bed-related scenarios and monitor sleep patterns and health
- **Technologies used: Java, Zigbee, Weka (Machine Learning Tool)**