

# YUSHUO HAN

## SUMMARY OF QUALIFICATIONS

### LANGUAGES

Python, JavaScript, Java, C/C++, HTML/CSS, MMIX

### DATABASES

MySQL, MSSQL, MongoDB

### FRAMEWORKS AND ENVIRONMENT

React.js, Node.js, Express.js, JWT, and Socket.io;  
SQLAlchemy, CherryPy, Python Regex and Mako;  
Mapbox; Selenium, Python Request, Python lxml.

### TOOLS

MySQL Workbench, SQL Server Management Studio, MongoDB Compass; Postman, Tableau.

### 2+ YEARS EXPERIENCE IN

Data Structures, Web Programming and Databases demonstrated through various projects

### EXCEPTIONAL LEADERSHIP SKILLS

proven through coordination as project leader

### STRONG COMMUNICATION SKILLS

with experience of working in teams of various sizes

## RELEVANT COURSES

### OBJECT-ORIENTED SOFTWARE DEVELOPMENT

Linux shell, OOP, C++, Unix tools, design patterns, testing

### DESIGN FUNCTIONAL PROGRAMS (ADVANCED)

Data structures and algorithms, sorting, lazy evaluation, big-O analysis, and lambda calculus

### ALGORITHM DESIGN & DATA ABSTRACT.N (ADVANCED)

Mutation, memory allocation, compilers, assemblers, machine language

## EDUCATION AND ACHIEVEMENTS

### B. OF COMPUTER SCIENCE (2018-2023)

**University of Waterloo (Average: 92.4%)**

- Mathematics Global Scholarship  
for exceptional international applicants
- President's Scholarship of Distinction  
for over 95% average
- Mathematics Promissory Scholarship  
for outstanding Euclid contest performance

### DISTINCTION (99.5% PERCENTILE WORLDWIDE) AND SCHOOL CHAMPION IN EUCLID/FERMAT/HYPATIA CONTESTS

University of Waterloo | OCT 2016 - JUN 2017


- Invited to UWaterloo on-campus workshops based on outstanding contest performances

### DEAN'S HONOURS LIST


University of Waterloo | SEP 2018 - APR 2019


- Awarded "Term Dean's Honours List" for all terms by maintaining 92% + term average.


## Bachelor of Computer Science, 2A

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## WORK EXPERIENCE

### SOFTWARE DEVELOPER (CO-OP)

Opentext HQ | Waterloo, ON | MAY - AUG 2019

- Pitched and completed a project on the failure analysis feature of interior design software products' web-based internal automation test platform using **Python, MSSQL, SQLAlchemy, Python Regex, CherryPy, and Mako Templates**; enhanced the efficiency of regression data processing and automated analysis by at least **500%**.
- Implemented **object-oriented framework functions** and mapped **UI objects** using **Python** for **PyWinAuto** and **command line test automation framework**; new functions decrease network drive file-size by at least **66%**.
- Migrated 150+ automated test scripts from Visual Basic to Python. Used **Jenkins** and **Virtual Machines(VMs)** for testing.

## PROJECT EXPERIENCE

SPOTSHARE | JUN - SEP 2019 | [/shawnhan108/SpotShare-Backend](#)

- Created a photography web app using **Node.js** backend (**RESTful API**), **React.js** frontend, **MongoDB** NoSQL database, **React-bootstrap** framework, **Mapbox** dynamic map API, **JWT** authentication, and **socket.io** for Websocket.
- Featured posts with photography specs, post and location ratings and rankings, customized map and markers, and keyword searching.
- Deployed app at **photography-spot-share-front.herokuapp.com/** For best performance, **please use Google Chrome** as the browser.

DOT. | SEP - SEP 2019 | [/shawnhan108/DOT.](#)

- Designed and implemented an accessibility application that converts eye movements to communication messages.
- Used a **Keras** library with **Tensorflow** backend to train a **binary classifier Machine Learning model** using dataset between open and closed eyes.
- Translated data input into **Morse code** and further decrypted data into audio output and keystrokes.
- Utilized **Python Opencv** for webcam input and **numpy** for AI model.

ARGENTARIA+ | MAY - SEP 2019 | [/shawnhan108/Bank\\_Ecosystem](#)

- Built a banking application using **Python** to model modern bank user accounts and incidence details.
- Stored and manipulated user and account data using **MySQL** database queries; optimized app data retrieval efficiency by loading data in constructed **Python dictionaries**.
- Integrated data pipeline with **Tableau** dashboard for **data visualization and analytics** for user behaviour and business insight.

FLIGHT PLANNER | MAY - JUL 2019 | [/shawnhan108/Flight\\_planner](#)

- Implemented a flight planning application that tracks user's flights, monitors flight ticket price fluctuations, and notifies user when all filters and notification criterion are met.
- Scraped flight data from AirCanada.ca using **Selenium** and stored data in **MySQL** database for analytics using **Python**.
- Applied **statistic algorithms** for prices' trend insight.