YUSHUO HAN

Bachelor of Computer Science, 2B

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SUMMARY OF QUALIFICATIONS

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

DATABASES
MySQL, MSSQL, MongoDB

FRAMEWORKS AND ENVIRONMENT
React.js, Node.js, Express.js, JWT, and Socket.io;
Python Keras, OpenCV, Tensorflow; Request, LXML;
SQL Alchemy, CherryPy, Python Regex and Mako;

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

3+ 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

- *Data Structures and Data Management* (Algorithm design and analysis).
- *Foundations of Sequential Programs* (MIPS, compilers, machine language).
- *Object-oriented Software Development* (C++, OOP, design patterns, Bash)
- *(Advanced) Design Functional Programs* (Data structures, time complexity, sorting, lazy evaluation, lambda calculus)
- *(Advanced) Algorithm Design and Data Abstraction* (C, memory allocation, compilers, assemblers, machine language)

EDUCATION AND ACHIEVEMENTS

B. OF COMPUTER SCIENCE (2018-2023)
University of Waterloo (Average: 90.3%)

- 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

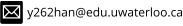- Invited to UWaterloo on-campus workshops based on outstanding contest performances

DEAN'S HONOURS LIST
University of Waterloo | SEP 2018 - APR 2019

- Awarded "Term Dean's Honours List" for all terms .

WORK EXPERIENCE

SOFTWARE DEVELOPER (CO-OP)
Opentext HQ | Waterloo, ON | MAY - AUG 2019

- Pitched and completed a project on the failure analysis feature of software products' web-based internal automation test platform using **Python, MSSQL, SQL Alchemy, 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 **Python 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.

GAME OF RAIINET | NOV - DEC 2019 | repo access upon request

- Developed a board game in **C++** in which both players have data and virus as pieces to battle according to their strength levels and various ability cards at hand.
- Utilized **OOP concepts** in classes, **C++ design patterns** including **Observer, Visitor, and Bridge**, as well as **C++ smart pointers**.
- Presented game board using X11 graphics and XQuartz.