

YUXUAN YANG

✉ y464yang@uwaterloo.ca
🌐 yuxuan-yang.com
☎ 4168324056
📍 1005-254 Phillip St,
Waterloo, ON, N2L
0E1

Skills

LANGUAGES

Java
Python
JavaScript
Scala
nodeJS
PHP
CSS/HTML
C++
C

FRAMEWORKS/TOOLS

Apache Flink
Apache Spark
Spring
Hibernate
AngularJS
Bootstrap
KAFKA
AWS
Google Cloud
React
OpenCL

METHODOLOGY

OOP
CNN
Reinforcement Learning
Functional Programming

Education

University of Waterloo
Computer Engineering

Udacity
Nanodegree Program Deep
Learning Foundation

Employment

360 Education Lab

Software Developer

Technology Involved: WebRTC, React, AWS S3, EC2, MySQL, Java

Toronto, Ontario, Canada
Sept. 2019 to Jan. 2020

Delivered core features for the video conferencing platform at monthly release.
Designed and implemented an extensible audit trails system.
Designed and refactored the main video meeting pages.

SSIMWAVE Inc

Real-Time Streaming Analytics

Technology Involved: KAFKA, Apache Flink, AWS, MemSQL, YAML, JSON, Bazel, Ansible.

Waterloo, Ontario, Canada
Jan. 2019 to Apr. 2019

Built and delivered a Recommendation Video Bitrate streaming engine processing raw data from scratch.
Designed and implemented the high-performance data ingestion backend system
Implemented integration testing and performed staging testing.
Collaborated with the research team on the recommended bitrate algorithm.

Ultimate Software

Software Developer

Technology Involved: Spring Boot, JPA, Hibernate, AngularJS, Liquibase, MariaDB, RabbitMQ, Maven.

Toronto, Ontario, Canada
Apr. 2018 to Aug. 2018

Implemented a core feature calculating payroll based on different time off events.
Researched and improved database performance issues.
Maintained database migration scripts.
Implemented new endpoints through RESTful APIs to handle different events to the user's timesheet.

NCR

Software Engineering

Technology Involved: Hibernate, Spring, Junit, SQL SERVER, JavaScripts, AJAX, SSO, SAML, Glassfish, Maven, Ant.

Waterloo, Ontario, Canada
Sept. 2017 to Dec. 2017

Worked at a paycheck team with applications scanning, processing, persisting bank checks that come from various device sources.
Implemented a new feature that processes log files involving multiple server communication and asynchronous work.
Maintained the application and fixed defects.
Designed a database table that fit large file data.

Bronte College of Canada

Software Developer

Technology Involved: PHP, Java, Bootstrap, AngularJS, Tomcat 7, MySQL.

Mississauga, Ontario, Canada
Jan. 2017 to May 2017

Delivered features and maintained defects for the student reporting, payment, food plan modules.
Built an event-triggered email notifying system with role filtering.
Built a monitoring system for students' lunch purchases with real-time updating.

Projects

C++ PROGRAM PERFORMANCE SPEED UP

Jan. 2020

- Used OpenMP to speed up N-Queen problems. With 14 threads, speed-up is 10x
- Used OpenCL GUP to stimulate Coulomb law and speed up computation up to 20x
- Used OpenCL GUP to speed up cracking JWT token up to 10x

STOCK SIGNAL PLATFORM

May 2019

- Leveraged alternative data to generating buy/sell signals of specific stock symbols.
- Implemented a backtester simulates stock trading with historical data and generates outputs of performance metrics, such as alpha and Sharpe ratio.
- Visualized signals buy different means by line chart, bar chart.
- Leveraged Gcloud to build a scalable system.

MAZE SOLVER

Sept. 2019

- Implemented Reinforcement Learning algorithms to solve a maze to achieve optimal rewards.
- Algorithms used: Double Q-learning, Expected SARSA, TD-Lambda.

POTHOLE DETECTOR

Sept. 2019

- An application on the mobile device collects three-dimensional acceleration data used in pothole detection analysis.
- Potholes are marked and visualized on the map with different severity levels.