

# YIFAN HU

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## EDUCATION

**Bachelor of Computer Science, 4th Year (Major GPA: 3.9/4.0)**

Sept 2019 - Dec 2023

University of Waterloo (*UW President's Scholarship of Distinction*)

Waterloo, ON

## SKILLS

Languages	Python, C/C++, Java, Golang, TypeScript, SQL, HTML, CSS, JavaScript, Scala, R
Technologies	AWS, Docker, Kubernetes, Redis, Kafka, React, SpringBoot, MySQL, Jenkins, TensorFlow
Domains	Fullstack Development, Data Engineering, Machine Learning, Data Science, DevOps, QA

## EXPERIENCE

### Software Engineer

May 2023 - present

*Huawei Technologies - Big Data & Intelligence Team*

*Vancouver, BC*

- Collaborated on the development of a high-QPS and thread-safe billing service for the company's SaaS-based product (OptVerse AI solver) in Beta, implemented in **Java SpringBoot** and micro-serviced on **HuaweiCloud**
- Spearheaded the migration of the product from monolithic architecture to a cloud-native environment, enabling ad-hoc instantiation and orchestration of tasks with **cloud-based Kubernetes cluster** and **OBS storage**
- Enhanced overall throughput of team's ETL pipeline for business intelligence analysis by performing comprehensive **SQL indexing** across the database, resulting in 50% improved query turnaround time on average

### Software Engineer

Sept 2022 - Dec 2022

*BlackBerry QNX - Engineering Team*

*Ottawa, ON*

- Renovated legacy data warehouse with high availability cloud architecture integrating **MySQL InnoDB cluster** and **Hadoop HDFS** on **Openstack**, yielding scalability, load balancing and fault tolerance with 99.9% uptime
- Trained and micro-serviced **BERT-based** NLP classifier on **AWS Lambda** to automate the license compliance check in **Jenkins** pipeline, reducing 30% code review time on average across the engineering division
- Led the design and development of a cross-team data platform to manage concurrent pipeline triggering and execution using fullstack technologies in **TypeScript**, **Python**, **React**, **Flask** and **AWS S3 bucket**

### Machine Learning Engineer

Jan 2022 - April 2022

*Woodbridge Group - Research & Development Team*

*Mississauga, ON*

- Automated the assembly-line defect detection process by constructing on-premise ML pipeline in **Nvidia Deepstream** and **CUDA** on **Jetson Nano**, supporting RTSP video streaming and real-time inferencing with scores
- Conducted transfer learning and few-shot learning on object detection and multi-class classification of car components with **YOLOv5** and **Faster-RCNN**, fine-tuned in **Nvidia Tao Toolkit** to reach 96% accuracy
- Designed and implemented robust **SIFT-based** image alignment algorithm to aid anomaly detection in dark environment in **C++** and **OpenCV**, achieved 95% success rate leading to \$20K of cost savings per month

### Fullstack Developer

May 2021 - Aug 2021

*SS&C Technologies - Product Team*

*Toronto, ON*

- Designed and implemented the company's product webpage in **React**, **Bootstrap** and **Figma**, utilized **Redux** for centralized statement management and **Next.js** for server-side rendering with a 50% improved loading time
- Optimized the business logic for **OAuth2.0-based SSO** using **AWS Cognito** and **Google Cloud API**

## PROJECTS

🌐 **UWork**: Fullstack Web application serving as a supplement to WaterlooWorks, supporting multi-threaded web scrapping with customized queries in **React.js**, **Node.js** and **Selenium**, deployed on **Heroku** for public use

🌐 **Stock Master**: **Ensemble learning** of **time series** and **NLP models** to predict the closing-price of DJIA