

HARRY ZHU

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EDUCATION

University of Waterloo

Honours Bachelor of Computer Science (Data Science)

Waterloo, ON

Apr 2027

- Courses: Data Structures, Object-Oriented Programming, Algorithm Design, Statistics, Linear Algebra, Calculus

TECHNICAL SKILLS

Languages: Java, C#, C/C++, TypeScript, Python, SQL, R

Frameworks: .NET, Spring Boot, React, Next.js, Blazor, Angular, Flask, Node.js, Pandas, NumPy, TensorFlow, SciKit

Developer Tools: SQL Server, PostgreSQL, Redis, Docker, Azure, Git, Maven, Gradle, Firebase, AWS, Vercel

EXPERIENCE

Amazon

Software Development Engineer

May 2025 – Present

Seattle, WA

- Contributed to the development of Service-side Local AZ Routing (SLAR) in DynamoDB which routes read operation requests to the nearest replica to reduce latency.
- Enabled broader SLAR adoption for more data plane APIs resulting in a **latency reduction of 750 μ s for P50 and 870 μ s for P99.9** during preliminary testing in the SFO region.
- Designing an automated re-enabling mechanism for SLAR **improving availability from 87% to 99.7%** across all regions.

TD Bank

Software Developer

Jan 2025 – Apr 2025

Toronto, ON

- Developed an **option pricing tool** with Python, leveraging NumPy, SciPy, and Bloomberg API to estimate the value of illiquid or unavailable options, saving analysts **10+ hours a week**.
- Integrated automated frameworks using Python and NumPy to **back-test quantitative investment strategies**, processing datasets of **10M+** data points.
- Engineered a private debt capital call tool in React, Django, and PostgreSQL, handling **\$68B+** in assets to streamline capital call processes for portfolio managers.

BTNX

Full-Stack Developer

Apr 2024 – Aug 2024

Pickering, ON

- **Led the development of a new ERP SaaS product** targeted towards small to mid-sized distribution centers with Blazor and .NET along with designing the relational database in SQL Server.
- Optimized **SQL Server query speeds by 34%** by introducing a lookup Redis cache and migrating schema to use indexes
- Engineered a **price optimization API** using Python Flask and statsmodels, **increasing sales revenue by 4%** through dynamic pricing based on product and client.

Open Sails Partners

Software Developer

Jan 2024 – Aug 2024

Toronto, ON

- Developed an Express API with OCR tools to extract and analyze data from CIMs, **reducing data processing time by 70%+** and automating financial model construction.
- Implemented web scraping tools with Puppeteer to streamline deal sourcing, **improving lead sourcing time by 20%**.

PROJECTS

Stock News Sentiment [🔗](#) | Python, TensorFlow, Pandas, Numpy, Sklearn

- Developed a **natural language processing** model in Python to analyze the sentiment of financial text.
- Created a **Deep Learning** model with **over 88% accuracy** across 3 distinct classes utilizing a **Gated Recurrent Unit** neural network with TensorFlow, Numpy, and Sklearn.
- Employed web scraping using BeautifulSoup and Pandas to create a dataset with **50,000+ financial headlines**.

Hands-on Fluency [🔗](#) | JavaScript, Python, React, Flask, Tensorflow, OpenCV, MediaPipe, SQLite

- Developed a sign language learning web platform with **React** and **Flask** that teaches and quizzes the user using their webcam with **OpenCV**.
- Leveraged Jupyter Notebook, Tensorflow, and MediaPipe to design and implement a **Convolutional Neural Network** for hand gesture recognition, resulting in a **71% accuracy across 30+ classes**.