

HANZ PO

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Education

University of Waterloo
Bachelor of Computer Science

Waterloo, ON
Expected 2029

Skills

Languages: Python, JavaScript, TypeScript, HTML, CSS, Ruby, SQL, Java, Kotlin, C#, C++, C, Lisp, Bash, Haskell
Technologies: Rails, Flask, React, Next.js, React Native, Redis, Kafka, PostgreSQL, MySQL, GraphQL, gRPC, Tailwind
Tools: Git, LangChain, Expo, Cursor, Node, Docker, AWS, GCP, MongoDB, Terraform, Postman, Buildkite, Grafana

Experience

- Shopify** [↗](#) May. 2025 – Aug. 2025
Software Engineer Toronto, ON
- Developed scalable backend services using **Ruby on Rails and gRPC**, enhancing retail feature performance between Shopify core and Shop App infrastructure, **reducing payload sizes by 80% and latency by 42%**
 - Increased in-store conversion and loyalty by developing a buyer profile feature into retail systems, allowing for personalized incentives, saving merchants **52+ hours/week** by **reducing checkout friction for 30% of customers**
 - Leveraged **GraphQL** for retail–Shopify core integrations, including groundwork for third-party payments in **Shopify POS**, impacting **100K+ merchants** in markets where alternatives drive up to **40% of transactions**
 - Created end to end testing for checkout flows in the **React Native** Customer View app (**50K+ downloads**)
 - Built **Grafana dashboards and alerts** for key system metrics, improving monitoring and incident response
- Cohere** [↗](#) Sept. 2024 – Aug. 2025
Data Engineer Toronto, ON
- Improved performance for **large language models** by annotating and testing code tasks across diverse domains such as **AWS infrastructure, algorithms, physics simulations**, improving coverage and reliability of outputs
 - Designed over **450+ targeted test cases** and identified failure modes in **Python, JavaScript, C, SQL, and C++**, reducing error rates on common categories and informing fine-tuning strategies adopted by research teams
 - Improved reinforcement learning from human feedback pipelines by supplying domain-specific evaluations and optimization feedback, enabling SOTA models like Command A to reach **86.2% MBPP+** and **92.6% RepoQA**

Projects

- ShapeShift (Y Combinator Unicorn Prize Winner)** [↗](#) — [React](#), [Three.js](#), [TypeScript](#), [Python](#), [OpenCV](#), [MediaPipe](#)
- Awarded **\$2000 from Y Combinator at Hack the North** for "building a project that could become a \$B company"
 - Lowered the typical **150+ hour proficiency barrier** of 3D modeling software by creating an accessible system that blends natural hand gestures with natural language, enabling faster onboarding and smoother workflows
 - Developed a full-stack 3D modeling platform with an interactive **Three.js** viewport and a real-time hand gesture recognition pipeline using **OpenCV** and **MediaPipe**, enhancing creative accessibility for non-expert users
- The Exercists (Databricks Award Winner)** [↗](#) — [Google Cloud Platform](#), [Terraform](#), [Flask](#), [MongoDB](#), [LangChain](#)
- Built a physiotherapy-focused game that incentivizes proper exercise form, integrating motion tracking with a **Flask/MongoDB** backend, and deployed the system on **GCP Compute Engine** provisioned via **Terraform**
 - Developed an agent using the OpenAI API and **LangChain** to personalize user experience and feedback
- Albumify - Automated album covers for Spotify playlists** [↗](#) — [Python](#), [JavaScript](#), [React](#), [SQL](#), [CockroachDB](#), [FastAPI](#)
- Developed **Albumify**, a web app that generates album covers for Spotify playlists with **React** and the **Spotify API**, backed by a **FastAPI** backend and a scalable **CockroachDB (PostgreSQL)** database for resilient data retrieval

Extracurriculars

- Wat Street** [↗](#) Nov. 2024 – Present
Machine Learning Engineer Waterloo, ON
- Implemented and optimized deep learning models in **PyTorch**, achieving **96.8%** accuracy on CIFAR-10 image classification tasks and reducing training time by **12%** through data augmentation and hyperparameter tuning
 - Developed a **Monte Carlo simulation** framework for European option pricing, running **5,000+** simulations per contract to estimate price distributions with an average error of **8%** compared to Black–Scholes benchmarks