

HANZ PO

hnqpo@uwaterloo.ca | linkedin.com/in/hanznathanpo | github.com/HanzPo | hanzpo.com | x.com/hanznathanpo

Education


University of Waterloo
Bachelor of Computer Science

Waterloo, ON
Expected graduation in 2028

Experience


Shopify  May. 2025 – Aug. 2025
Software Engineer Intern Toronto, ON

- 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**
- Developed scalable backend services using **Ruby on Rails and gRPC**, enhancing performance between Shopify core and Shop App infrastructure, **reducing payload sizes by 80% and latency by 42%**
- 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**
- Refined checkout flows in the **React Native** Customer View app (**50K+ downloads**), ensuring consistent experiences across diverse Android devices and improving reliability of in-store customer displays

Cohere  Sept. 2024 – Aug. 2025
Senior Data Quality Specialist (Code) Toronto, ON

- Enhanced training data for large language models by annotating and testing diverse code tasks across domains (e.g., AWS infrastructure, algorithms, physics simulations), improving coverage and reliability of model 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*

- Reduced the steep learning curve of 3D software (typically requiring 150 hours for proficiency) by building a system with gesture + language control
- Built a 3D modelling system in **Three.js** and a hand gesture recognition system in **OpenCV** and **MediaPipe**

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

PolyPace  — *Python, C#, OpenCV, MediaPipe, Unity, Blender*

- Built a first-person VR fitness game on **Meta Quest 3** that gamifies exercise, using **OpenCV** and **MediaPipe** for full body motion tracking, **Unity** for immersive gameplay, and **Blender** for 3D environments, enabling real-time activity translation and calorie tracking

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 Developer 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

Skills

Languages: Python, JavaScript, TypeScript, HTML, CSS, Ruby, SQL, Java, C#, C++, C, Lisp, Haskell, Bash
Technologies: Rails, Flask, React, Vue, React Native, Redis, Kafka, PostgreSQL, MySQL, GraphQL, gRPC, Tailwind
Tools: Git, Claude Code, LangChain, Expo, Cursor, Node, Docker, AWS, MongoDB, Terraform, Postman, Snowflake