Andrew Guo

andrew.guo@proton.me | linkedin.com/in/-andrewguo/ | github.com/andGuo

EDUCATION

Carleton University — Sep. 2020 – May 2025
Honours Bachelor of Computer Science — *Ottawa, Ontario*
- 4th-year standing, 12.0/12.0 CGPA (A+)
- *Relevant Coursework: Databases, Computer Vision, Operating Systems, RTOS, Blockchains, Distributed Processing*

EXPERIENCE

Junior Data Scientist — May 2024 – Aug. 2024
Public Health Agency of Canada — *Ottawa, Ontario*
- Created a pipeline to vectorize and store academic papers and use their embeddings in Large Language Models (LLMs) to streamline literature review
- Tested and aggregated performance data of various LLMs deployed in Google Cloud Platform (GCP) and Azure cloud environments
- Conducted large scale data gathering and processing using Apache Spark with notebooks in Databricks

Junior Full Stack Developer — May 2023 – Apr. 2024
Public Health Agency of Canada — *Ottawa, Ontario*
- Connected repositories on GitHub with Google Cloud Platform infrastructure using Terraform to create a CI/CD pipeline to deploy apps with high availability inside Google Kubernetes Engine
- Benchmarked and optimized existing GraphQL API to improve productivity for downstream users
- Wrote new features using Python in Django to deliver health data to users in production

Software Developer — May 2022 – Aug. 2022
Ross Video Ltd. — *Ottawa, Ontario*
- Wrote low-level driver code in C and prepared software for release in mission-critical hardware
- Updated and migrated production code between diverse LTS software releases
- Followed Agile software development methodologies to quickly implement new features for clients

PROJECTS

Botanic Buddy | *Swift, Python, PyTorch*
- Trained and deployed modified state-of-the-art YOLOv8 object detection model using CUDA and Pytorch for use on iOS devices in CoreML
- Created 50+ class labelled dataset using modern image segmentation techniques
- Designed intuitive and responsive UI elements using SwiftUI

Search Engine | *Typescript, React, Vite, Rust, MongoDB*
- Used Rust Axum and Tokio runtime to create a RESTful API to deliver JSON data from MongoDB up to 10x faster than Express.js
- Implemented MongoDB Atlas full-text search on indexed data gathered by Puppeteer web crawler
- Created a interactive browser client to allow user searches using debounced search queries and parameters in React

Look-Inna-Book | *Typescript, React, Next.js, Supabase (PostgreSQL)*
- Developed a full-stack web application with Supabase, RESTful API using Next.js, and hosted on Vercel to enable CRUD operations
- Implemented user authentication featuring JSON Web Tokens (JWTs) to grant role-based access control
- Wrote server-side PostgreSQL RPC functions, triggers, policies, and queries that improved overall application security

TECHNICAL SKILLS

Languages: C/C++, Go, Rust, Python, Javascript, Typescript, SQL (Postgres), Bash, Terraform (HCL), Swift
Frameworks/Runtimes: React, Node.js, Express.js, Next.js, Gatsby, Rust Axum (Tokio), Django, PyTorch
Developer Tools: Google Cloud Platform, Azure, Kubernetes (K8s), Docker, Git, GitHub, Jira, Vercel, Selenium, Puppeteer, Databricks, Excel