

Isaac Abell

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EDUCATION

University of Toronto

B.Sc. Computer Science, Statistics

Sep. 2022 – May 2026

CGPA: 3.53

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java, SQL (PostgreSQL)

Frameworks: React, Node.js, FastAPI, Spring Boot

Libraries: Pandas, NumPy, Matplotlib, Scikit-learn, PyTorch, Transformers, OpenCV

Developer Tools: AWS(EC2, Lambda, S3, RDS, Amplify), GCP(Vertex AI), Firebase, Git, Docker, GitHub Actions

EXPERIENCE

iXp Intern - Full Stack Developer

SAP

May 2024 – Present

Toronto, ON, Canada

- Developed a Vision Transformer (ViT) model using transfer learning to classify real-time user engagement, achieving **90% accuracy** with planned **global deployment** across 18 SAP Experience Centers in 2026.
- Built **data extraction, cleaning, and labeling pipelines** to prepare datasets for computer vision model training, ensuring high-quality inputs for real-time user engagement classification.
- Collaborated with a team of 5 interns to build **SAP Demo Environment 2.0**, a platform used by **20,000+** SAP Employees and Partners to showcase SAP solution demos; developing the front end with **TypeScript/React** and a **Node.js REST API** layer to organize and serve backend data.
- Successfully balanced full-time work with a full-time course load at the University of Toronto.

Research Assistant (part-time, for course credit)

University of Toronto Intelligent Adaptive Interventions Lab

Sep. 2024 – May 2025

Toronto, ON, Canada

- Developed a **full-stack web app** with end-to-end deployment to test the lab's **AI teaching assistant**, building a **FastAPI backend** and **React frontend**.
- Deployed the backend on **AWS EC2/S3** and the frontend via **AWS Amplify**.
- Reworked the underlying GPT-based model to make **queries concurrently**, improving processing speed by **80%**.

Software Engineering Intern

Appex

May 2023 – August 2023

Boston, MA, USA

- Developed and deployed an **AI-powered app review summarization tool** utilizing the **OpenAI API** and prompt engineering. Implemented AWS services (CloudWatch/Lambda for scheduling, SES for notifications) to deliver actionable insights, enabling Development and Product teams to rapidly identify and resolve user complaints, contributing to a **20% productivity increase**.
- Reduced **AWS costs by \$2,500/month** by replacing a macOS EC2 instance used for APNs token signing with a **Linux-based implementation** using portable credentials.

Software Engineering Intern

Guavy

May 2021 – August 2021

Victoria, BC, Canada

- Developed Puppeteer scripts to scrape websites, enhancing the volume and quality of data in Guavy's databases.
- Created Cypress tests to validate website functionality prior to deployment, ensuring a reliable user experience.

PROJECTS

Rental Listings Website with Commute Filter | GitHub Repo | Live Site

- Engineered a **full-stack rental search platform** with a React frontend and **serverless backend**, enabling users to search and filter listings by **commute time**.
- Built a **hybrid Python data pipeline** to scrape real estate listings locally, store them in AWS S3, and **automate updates** via a serverless backend (AWS Lambda + RDS) exposing a REST API for real-time filtering.
- Technologies: Python, SQL, JavaScript, React, Docker, GitHub Actions, AWS

Artificial Isaac: Personalized AI Chatbot | GitHub Repo

- Fine-tuned Qwen 2.5 (7B) on personal WhatsApp and Instagram chats to create a chatbot that mimics my communication style.
- Integrated **Retrieval-Augmented Generation** using ChromaDB for accurate personal knowledge retrieval.
- Technologies Used: Python, PyTorch, Transformers, ChromaDB, BitsAndBytes, LoRA