

# Isaac Abell

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## EDUCATION

<b>University of Toronto</b> <i>B.Sc. Computer Science, Statistics</i>	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, OpenCV

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

## EXPERIENCE

<b>iXp Intern - Full Stack Developer</b> <i>SAP</i>	May 2024 – Present
	<i>Toronto, ON, Canada</i>

- Developed a computer vision model leveraging transfer learning on a Vision Transformer (ViT) to classify real-time user engagement, with planned global deployment across 18 SAP Experience Centers in 2026.
- Collaborated with a team of 5 interns to build SAP Demo Environment 2.0, a platform currently used by 20,000+ users to showcase SAP solution demos; developing the front end with TypeScript/React and adding a Node.js REST API layer to organize backend data for integration with the front end.

<b>Research Assistant (part-time, for course credit)</b> <i>University of Toronto Intelligent Adaptive Interventions Lab</i>	Sep. 2024 – May 2025
	<i>Toronto, ON, Canada</i>

- Completed end-to-end development of a full-stack web app to test the lab's AI teaching assistant, with a FastAPI backend, React frontend, backend on AWS EC2/S3, and frontend deployed via AWS Amplify.

<b>Software Engineering Intern</b> <i>Appex</i>	May 2023 – August 2023
	<i>Boston, MA, USA</i>

- Built and deployed an app review summarization tool to generate monthly summaries for development and UX teams, enabling them to prioritize app fixes more efficiently, by using the OpenAI API, leveraging prompt engineering and automated AWS services (CloudWatch/Lambda for monthly execution, SES for email notifications).
- 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.

<b>Software Engineering Intern</b> <i>Guavy</i>	May 2021 – August 2021
	<i>Victoria, BC, Canada</i>

- 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 front end and serverless backend, allowing users to search and filter rental listings based on commute time to a specified destination.
- Developed a hybrid data pipeline in Python that scrapes real estate listings locally (to bypass IP address blocks) and stores them in AWS S3 for downstream processing.
- Deployed a serverless backend using AWS Lambda and a SQL database on AWS RDS, automating updates from S3 and exposing a REST API for real-time filtering.
- Technologies Used: 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 (RAG) using ChromaDB for accurate personal knowledge retrieval.
- Optimized training with LoRA and 4-bit quantization for consumer GPUs (16GB+ VRAM).
- Technologies Used: Python, PyTorch, Hugging Face Transformers, ChromaDB, BitsAndBytes, LoRA