Isaac Abell

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EDUCATION

University of Toronto   Toronto, Canada
B.Sc. Computer Science, Statistics, CGPA: 3.53   *Sep. 2022 – May 2026*

EXPERIENCE

iXp Intern - Full Stack Developer   May 2024 – Present
SAP   *Toronto, ON, Canada*
- Developed a real-time computer vision–based engagement tracking system using transfer learning on a pre-trained ResNet model to help designers optimize customer engagement at SAP Experience Centers, with deployment planned for 2026.
- Worked with a team of interns to build SAP Demo Environment 2.0, a platform currently used by 20,000+ internal users and partners to access and present SAP solution demos; developing the front end with TypeScript/React and adding a Node.js REST API layer to organize backend data for seamless integration with the front end.

Research Assistant (part-time, for course credit)   Sep. 2024 – May 2025
University of Toronto Intelligent Adaptive Interventions Lab   *Toronto, ON, Canada*
- Built and deployed a full-stack web app to test the lab's AI teaching assistant in real-world applications, developing a FastAPI backend, React frontend, and hosting backend services on AWS EC2/S3 with frontend deployment via AWS Amplify.

Software Engineering Intern   May 2023 – August 2023
Appex   *Boston, MA, USA*
- Built and deployed an app review summarization tool using the OpenAI API, leveraging prompt engineering and automated AWS services (CloudWatch/Lambda for monthly execution, SES for email notifications) to generate monthly summaries for development and UX teams, enabling them to prioritize app fixes more efficiently.
- 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   May 2021 – August 2021
Guavy   *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 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

Algorithm Visualizer| GitHub Repo | Live Site
- Built an interactive web tool to visualize classic algorithms including DFS, BFS, Quicksort, Heapsort, and Binary Search.
- Implemented step-by-step animations using React and Framer Motion, allowing users to trace array and graph operations in real time.
- Technologies Used: React, TypeScript, Framer Motion

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), Git, Docker, GitHub Actions