

# Hamzah Behery

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## EDUCATION

### University of Toronto

Honours BSc in Computer Science

Toronto, ON

Graduated Dec 2024

- Data Structures and Algorithms, Software Design, Databases and Systems Programming, Computing in C/Python
- Awarded: UofT President's Scholars of Excellence Award (Top 90 Applicants), 2020-24 Dean's List

## EXPERIENCE

### TriSpects Inc.

Fullstack Software Engineer

Sep 2023 - Jan 2024

- Fully developed **10+ page** company website using native **JavaScript/HTML/CSS**, Bootstrap, and CSS asset libraries to ensure a **100% responsive design** and seamless user experience across all devices
- Engineered the website backend architecture and **RESTful API** using a **Python Django** framework (Wagtail), enabling seamless frontend to backend integration
- Leveraged **server-side rendering** (SSR) on key assets to improve SEO and reduce overall page load times
- Implemented dynamic elements through advanced **JavaScript DOM manipulation** and facilitated form submissions while adhering to WCAG 2.1 standards, ensuring a seamless experience for **2.6+ million users**
- Designed custom data structures/components to enhance website functionality and a **MySQL** database with a tailored schema to efficiently organize **100+** website assets
- Deployed the website to production using **Apache** while managing version control via **Git** to separate production and development branches, ensuring stable releases to customers and **zero downtime** during deployment

### SIRTTS Inc.

Fullstack Software Engineer

May 2023 - Sep 2023

- Built an application (**Flutter/Python**) optimizing appointment setting process used by **1.7+ million** Reliance Home Comfort customers in Canada. Engineered a **RESTful API** using **Python Flask** to communicate suitable appointment dates between the frontend and backend based on customer needs and stakeholder requirements
- Implemented two fine-tuned AI models to create a tool (**Flutter/Python NumPy, PyTorch**) summarizing corporate group chat messages into action items, for use by a K-12 school staff team housing **2000+ students**
- Worked with a team to test a school board web-app under an **AGILE development** workflow, involving creating tickets and managing bug reports on the **JIRA** platform, and integrating customer feedback to improve design
- Developed a strategic plan to leverage **AI NLP solutions**, including **PyTorch** and **NumPy** for future integration into the company's existing technologies to enhance data processing and automation capabilities

## PROJECTS

### MAC Reality Quest | *TypeScript, React, Next.JS, SQL* | **200+ Hours**

[GitHub Repo](#)

- Fully developed an online puzzle game website with **150+ concurrent** users at peak operation times. Included a user system utilizing the **JWT authentication** protocol and a **RESTful API** managing up to **200,000+ requests/day** for facilitating user sign-in and in-game tasks
- Separated server/client **React components** resulting in significantly faster load times/performance, and used **TailwindCSS** along with component library DaisyUI to develop user-friendly, responsive design

### AI-Powered Password Manager | *Python (PyTorch, NumPy, Tkinter)* | **75+ Hours**

[GitHub Repo](#)

- Stored user account information using a fine-tuned version of Microsoft's CodeBERT-base **AI model** to recommend ideal passwords to users, trained on **650,000+** data entries
- Used **Python Tkinter** to provide a seamless, interactive user experience across multiple platforms

### Climate Change Data Visualizer | *TypeScript, React, CSS, Python* | **100+ Hours**

- Cross-referenced **250+ years** of carbon dioxide emissions data with **500,000+** entries of environmental metrics to visualize the resulting information using a **React** library and **RESTful API** built with **Python Flask**

## TECHNICAL SKILLS

**Languages:** JavaScript, CSS, HTML5, Python, SQL, C, C++, Flutter

**Libraries/Frameworks:** TypeScript, React, Next.JS, TailwindCSS, Node.JS, Django, Flask, Apache

**Developer Tools:** Git, Docker, Vercel, Postman, PyTorch, NumPy, Pandas, TensorFlow, Jira