# Hamzah Behery

# **EDUCATION**

#### University of Toronto

Toronto, ON

Honours BSc in Computer Science

Expected 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.

Sep 2023 - Jan 2024

Fullstack Software Engineer

- 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. May 2023 - Sep 2023

Fullstack Software Engineer

- 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, Python, SQL, HTML5, C, C++, Flutter

Libraries/Frameworks: TypeScript, React, Next.JS, TailwindCSS, Node.JS, Flask, Apache Developer Tools: Git, Docker, Vercel, Postman, PyTorch, NumPy, Pandas, TensorFlow, Jira