Hamzah Behery

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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. Used Python Flask to engineer a RESTful API 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 Online Game - *TypeScript, Next.JS, TailwindCSS, SQL*   GitHub Repo

- Fully developed an online puzzle game with **150+ concurrent** users at peak operation times, including 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 All-in-One Password Manager - *Python (PyTorch, NumPy)*   GitHub Repo

- Stores user account information and uses a fine-tuned version of Microsoft's CodeBERT-base **AI model** to recommend ideal passwords to users, trained on **650,000+** data entries.
- Uses Python tkinter to provide a seamless, interactive user experience across multiple platforms.

Climate Change Data Visualizer - *TypeScript, Next.JS, TailwindCSS, Python (Flask)*

- Parsed and analyzed large datasets dating **250+ years** of carbon dioxide emissions across **150+ countries**.
- Cross-referenced data with **500,000+** entries of environmental factors such as average temperature, and visualized the resulting information using a **React** library and RESTful API built with the Python Flask framework.

TECHNICAL SKILLS

Languages: JavaScript, CSS, Python, SQL, HTML5, C, C++, Flutter
Fullstack Development: TypeScript, React, Next.JS, TailwindCSS, Node.JS, Flask, Apache, ML
Other Tools: Git, Docker, Vercel, Postman, PyTorch, NumPy, Pandas, TensorFlow, Jira