# Hamzah Behery

### **EDUCATION**

## University of Toronto

Graduated Dec 2024

Honours BSc in Computer Science

Toronto, ON

- Data Structures & Algorithms, Operating Systems, Databases & Software Design, Computing in JS/Python
- Awarded: UofT President's Scholars of Excellence (Top 90 Students), 2020-24 Dean's List

#### EXPERIENCE

TriSpects Inc.

Sep 2023 - Jan 2024

Fullstack Software Engineering Intern

Toronto. ON

- Engineered company website's **RESTful API** and backend architecture using **Python Django (Wagtail)**, improving API response times by 57% and reducing overhead when fetching data through heavy queries
- Saved the company \$5,500 annually by migrating to an in-house server; designed a MySQL database to efficiently organize 100+ website assets with a tailored schema and custom data structures/components
- Fully developed 15+ page company website end-to-end using JavaScript/HTML/CSS and Bootstrap for the frontend interface, ensuring a 100% responsive design and seamless user experience across all devices
- Implemented dynamic JavaScript components by leveraging event delegation and mutation observers, while ensuring a seamless interface for 7000+ users by adhering to the WCAG 2.1 accessibility standards
- Deployed the website using **Apache** while managing **version control via Git** to separate production and development branches, ensuring **zero downtime** and stable releases to customers during deployment

SIRTTS Inc. May 2023 - Sep 2023

Software Engineering Intern

Toronto, ON

- Used **Python Flask** to engineer a **RESTful API** and deploy an application optimizing the appointment setting process for 1.7+ million customers across Canada, addressing customer needs and stakeholder requirements
- Developed and spearheaded SIRTTS's strategic plan to utilize AI NLP libraries in the company's tech-stack (Python, HTML/CSS, JavaScript) to enhance data processing and client deliverables as described below
- Implemented two fine-tuned LLM models to create a Python-based tool (NumPy, PyTorch) summarizing 300,000+ corporate chat messages into action items, boosting client workflow efficiency by 200%

## LEADERSHIP & ACTIVITIES

Ridge Tutoring | CTO & Founding Engineer

JavaScript, HTML, CSS, AWS, SQL

- Drove 100% of technical strategy and execution, developing a peer tutoring web-app supporting 500+ active users by engineering a MySQL database, RESTful API, authentication system, and responsive UI
- Led and managed a team of 3 engineers in bi-weekly sprints, overseeing development, maintenance, and deployment of new features while guiding 2 interns through technical training to overtake larger responsibilities
- Deployed scalable backend services on AWS (EC2, S3, RDS) to handle high-traffic workloads (up to 35,000+requests/week) and optimize performance, reducing server costs by 30% while remaining highly available

## **PROJECTS**

MAC Reality Quest | AWS, TypeScript, React (+Next.JS), SQL

Website | GitHub Repo

- Fully developed and deployed a full-stack web application with 150+ concurrent users at peak operation times, including a NextAuth user system utilizing the JWT authentication protocol and a RESTful API managing up to 1,500+ queries/day for facilitating user sign-in and in-game tasks
- Leveraged AWS Lambda to deploy scalable, serverless API endpoints, reducing backend infrastructure overhead and improving system reliability by over 40% during peak loads

AegisLock | Python (PyTorch, NumPy, Tkinter)

GitHub Repo

• Implemented a fine-tuned Microsoft CodeBERT-base AI model trained on 650,000+ data entries to recommend ideal passwords to users while securely storing account information and assessing it for vulnerabilities

# TECHNICAL SKILLS

Languages: JavaScript, CSS, HTML, Python, SQL, C/C++, Java, Go

Libraries/Frameworks: TypeScript, React, Next.JS, Node.JS, Django, Flask, PyTorch, Bootstrap Developer Tools: AWS, Git, Docker, Kubernetes, Vercel, Postman, Firebase, Apache, MongoDB, Jira