RÉNA SOPHIA HAJJAR

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TECHNICAL SKILLS

Languages: Python, Java, C, JavaScript, Typescript, Ruby, SQL, C++, HTML, CSS
Frameworks & Technologies: React, Angular, Spring Boot, MATLAB, Azure Tech Stack, MongoDB, Docker, Power Automate

EDUCATION

Queen's University, Kingston, Ontario — September 2022 — April 2026
Computer Science BCS with Honours — Culminative GPA: 3.9/4.3

- Queen's University Excellence Award (92%+ Entrance Scholarship)
- Coursework: Data structures, algorithms, complexity analysis, linear data analysis with MATLAB, operating systems

EXPERIENCE

Backend Software & Data Engineer Intern — Toronto, Ontario
Ontario Public Service — May 2024 – Aug 2024, Full-Time | Sept 2024 - Dec 2024, Part-Time

- Modernizing Ontario application interfaces by rebuilding in a **SpringBoot backend** for higher **scalability**
- Growing **project management skills** in an **Agile development environment** through participation in senior workshops
- Exploring fundamental backend principles such as **HTTP requests, SSL, and web servers**
- **Automating** email alerts by **building API endpoints** to listen to database updates and alert user accounts accordingly
- Streamlining data flow through **ETL pipelines** built in **Azure Data Factory** while documenting the process
- Driving satisfaction by presenting data in client-specified format through **Azure Databricks notebook** transformations written in **Spark and SQL**
- Expediting booking reservation system with **Microsoft Power Automate** to completely automate database update process

Undergraduate Student Researcher — Toronto, Ontario
Queen's Lab for Percutaneous Surgery — October 2023 - Present, Part-Time

- **Automating data flow** pipeline **using Pandas** to increase efficiency of data annotation to training
- Attaining **end-to-end machine learning** knowledge, from data pre-processings to scripting and calibrating
- Training **ML models** for **surgical object recognition** and tracking if machinery in 3 dimensions

Software Engineer Intern — Toronto, Ontario
Readwise — May 2023 - September 2023, Full Time

- **Co-authored** the new Notebook feature in Readwise Reader, as well as eliminated bugs in previously written features with **code-reviews from senior developers**
- Gained **full-stack experience**, with a front-end focus on **React and NodeJS web development** written in Typescript and back-end **data migration tasks** with Python
- Developed with React best principles in mind, creating components according to user input with a **CI/CD mindset**
- Collaborated with **cross-functional teams** to learn from and reach common goals to better the company in a dynamic startup environment
- Contributed to the global team effort to drive user growth by **8,000 customers** during time spent at Readwise, with **over 25 personal pull requests merged**

PROJECTS

Good Reads for Nerds — Book Tracking Application — github.com/rena-hajjar/GoodReadsForNerds — July, 2024

- Developed a **dynamic web application** with a **React frontend** and **Spring Boot backend**, integrated with **MongoDB** for efficient database management
- Implemented features enabling **users to comment and annotate** individual book chapters, **enhancing reading comprehension** and providing a platform for thoughts
- Currently **expanding the project** to include **user accounts, authentication**, and comprehensive **unit testing**
- **Future enhancements** include the creation of user-driven "book clubs" for collaborative discussions and idea sharing

Injection Administration Tracking — 3^{rd} place winner of NextGen Simulation Hackathon — February $9^{th} - 11^{th}$, 2024

- Developed a **metric-based training system** for lifelike clinical simulations. Utilizing **optical tracking** and **open-source software**, created a visual guidance tool for injections, providing **real-time feedback** to students
- Using an **OptiTrack camera and 3D printed sensors** on the needle, metrics were transferred via **Plus to 3D Slicer**, visualizing movement on a phantom model
- Students were able to **visualize the movement** of their needle with Slicer transforms, as well as **analyze the angle and depth** of their injection practice

FreshSave — QHacks 2024 Submission — github.com/rena-hajjar/QHACKS24 — February $1^{st} - 4^{th}$, 2024

- Developed an application to combat food waste in Kingston in a **48 hour development sprint**
- Implemented a **MongoDB backend** for efficient inventory management, and integrated **OpenAI's API** with Python injections for real-time meal kit creation with food close to expiry
- Designed a **user-friendly React frontend** for seamless interaction, enabling nonprofits to coordinate same-day pickups
- Presented project goals and impact at a final conference, showcasing expertise in **backend development, frontend design, and API integration**

EXTRACURRICULAR ACTIVITIES

Logistics Director — Smith Business & Technology

- Leading a **team of 5** students to organize a conference to bridge the knowledge gap between business and tech

HackHer Coordinator — Queen's Women in Computing

- Organizing a ~100 person hackathon with sponsored events and keynote speakers, with an aim to encourage women to inquire more and put their ideas into action in a 48 hour sprint