

# Ayman Kassab

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## EDUCATION

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- **University of Waterloo** Waterloo, Ontario  
*Bachelors of Computer Science, Software Engineering Specialization* May 2018 - April 2022

## EXPERIENCE

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- **NERv Technology** Kitchener, Ontario (Remote)  
*Software Developer - Intern* Sept 2021 - Dec 2021
  - Improved backend server security by mitigating DDoS attacks with the Sliding Windows Counter algorithm, implemented as middleware on ASP.NET Core 3 (C) with Redis, resulting in \$9000 in yearly savings and a 12% reduced in-memory footprint.
  - Re-architected a data-export feature using Kotlin and RealmDB on the clinical trial team's Android tablet application, allowing users to export all patient info, device info, and sensor data associated with the tablet into an encrypted zip folder containing .csv and .json and workbook files.
  - Implemented a client-driven database migration system using serverless Azure functions and Queue Storage to let the studies team manually send entries from an old CosmosDB to a newer instance.
- **Rocket Doctor** Toronto, Ontario (Remote)  
*Software Engineer - Intern* Jan 2021 - April 2021
  - Architected and implemented an abstract React form builder library with Express.js (TypeScript) and PostgreSQL (TypeORM) featuring Slack, Google Sheet, and SendGrid API integrations to streamline the development of all patient onboarding forms.
  - Deployed five patient onboarding forms and leveraged Segment API, Google Tag Manager, and Google Pixel Trackers to conduct usability tracking and saw 54,000 visitors that year.
  - Improved front-end app performance by re-creating forms in Next.js and implementing component memoization and persistent states using React Hooks.
- **Affordable Port Colborne Storage** Hamilton, Ontario  
*Software Engineer - Contract* May 2020 - March 2021
  - Developed, designed and deployed a self-storage booking system using Angular 9, Node.js (Express), MySQL, Square API, and GoDaddy.
  - Reduced staff hours by creating recurring scripts with node-cron to charge customers monthly using Square API, warn customers of late payments/termination using Nodemailer, and adjust Google AdWords budget via Google API, saving the company 200+ staff hours.
  - Created an admin portal for controlling recurring scripts using Node.js and Google Sheets API, giving the owner the ability to turn on/off backend business logic when needed.

## PROJECTS

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- **Drink Quality:** A Neural Network created from scratch with Python to assess drink quality.
- **Atrium CDVI API Tool:** An API wrapper created with Node.js to allow developers to make API calls on a remote storage management website by bypassing their anti-scraping protection using the rc4 decryption algorithm.
- **Social Sports:** An Android application programmed with Kotlin, which uses geolocation to create or join nearby sports events in your local area.

## SKILLS

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- **Languages:** C#, Python, Kotlin, TypeScript, JavaScript, SQL, HTML, CSS, Bash
- **Tools & Frameworks:** Git, ASP.NET Core 3, Node.js, React, Android Studio, PostgreSQL, Redis, Docker, Azure

## ACTIVITIES AND ACCOMPLISHMENTS

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- **Undergraduate Student Mentor** - Tech+ UW, Jan 2021 - April 2022
- **GraphQL Workshop Mentor** - Hack the North, Dec 2021
- **EIN Presswire** - Affordable Port Colborne Self Storage launches Self-Serve Reservation Portal - Oct 2020
- **Referee** - MYSL Soccer League, May 2019 - Aug 2019