

# hamza sohail (he/him)

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hsohail.com

## work experience

### Backend Developer - cuBlueprint

Since 08/2020. Volunteer. 12 Months. Remote.

node.js

mongo

docker

test driven development

- Implemented and documented over 30 endpoints with **input validation** and **authentication** using an MVC based design pattern.
- Developed unit and integration tests for the endpoints to achieve a **100% test coverage**.
- Architected a CI/CD pipeline that **automated application testing** and deployment.
- Optimized Docker images by using Alpine Linux and removing redundant layers leading to **10 times smaller image sizes** and **50% faster builds**.
- Coordinated **full cycle software development** with an **agile** team of developers following **test driven development** practices.

### Software Developer - BlackBerry

04/2021 - 08/2021. Internship. 4 Months. Remote.

node.js

postgresql

docker

cyber security

- Championed the migration and refactoring** of an internal testing tool to use PostgreSQL to achieve persistent storage for testing configs leading to **efficient workflows for developer teams**.
- Refactored** part of the legacy codebase to use the ES6 syntax of JavaScript **drastically increasing code readability and maintainability**.
- Designed** a tool to assist support teams at BlackBerry in **securely looking up internal data** through a **self-serve dashboard** leading to fewer tickets being generated by support teams for developer teams.
- Patched a potential username enumeration vulnerability** by removing certain response messages that could be used by an attacker to gather a list of valid usernames **improving the security of internal APIs**.

### Undergraduate Researcher - CHORUS Lab

04/2020 - 04/2021. Internship. 12 Months. Remote.

node.js

typescript

angular

research and development

- Prototyped a first of its kind** non-visual security feedback system using an Apple Watch to give users **real-time security notifications** via haptics.
- Architected a browser extension** that notified users when they visited insecure websites via haptics **improving security awareness** for users with visual impairities.
- Developed a series of web-based games using Angular and the G-Develop game engine to inform pre-teens about **digital literacy concepts** such as **privacy**.
- Created an **API to manage game assets** from a web dashboard without having to build and redeploy the game allowing for **rapid prototyping** of the various levels in the games.

### Incoming Backend Developer - Shopify

Fall 2021. Internship. 4 Months. Remote.

## education

### Bachelor of Computer Science - Carleton University

Since 09/2019. Expected Graduation Date: 04/2023

11.5 / 12 CGPA (A+)

Dean's Honor List Award, Dean's Summer Research Internship Award, I-CURERUS Award

## ask me about

### Tech Lead - Google Developer Student Club

Since 08/2021. Remote.

Helping student developers grow their knowledge in a peer-to-peer learning environment and **build solutions for local communities**.

### Academic Lecturer - Carleton Artificial Intelligence Society

11/2019 - 08/2020. Remote.

**Lead weekly workshops** on topics such as data science and machine learning using frameworks like TensorFlow, Pandas and NumPy.

### Data Scientist - Carleton University

10/2019 - 05/2020. Remote.

Worked with a PhD student to scrape and analyze protein interaction data to **find novel cancer-causing genes** for their PhD research.

### Outstanding Teaching Assistant Nominee with an Honorable Mention - Carleton University

05/2021. Remote.

Nominated by ten students for my efforts as a TA to **create an inclusive learning environment** where all questions were welcome.

## languages and tools

python

javascript

node.js

express

socket.io

mongo

mongoose

graphql

docker

## skills and knowledge

version control

testing

test driven development

object oriented programming

databases

rest api

devops

## career interests

backend

swe/sde

fullstack

technical product management