

# NAUSHER RAO

SOFTWARE ENGINEER

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## PROFESSIONAL EXPERIENCE

### Shopify

Software Engineer

Jan. 2023 - Apr. 2023

- Continued to be a part of the Unified App Deployments Team and worked on creating a system that allows Shopify Partners to host third-party extensions through Shopify infrastructure. I achieved this by working on the **Ruby on Rails** backend to add and rework endpoints using **GraphQL** for this new system, which is interacted with by roughly **2000 developers daily**.
- Created new sections on the Shopify Partner Dashboard web app using **React (TypeScript)** that interface with these new endpoints.

Software Engineer

May 2022 - Aug. 2022

- Was a part of the Unified App Deployments Team and worked on creating a system that allows Shopify Partners to host third-party extensions through Shopify infrastructure.
- Added a handful of new **OAuth** fixes and interactive features (using TypeScript's Enquirer library) to the official open-source Shopify CLI written in TypeScript. The CLI is used by **850 third-party applications daily**.
- Rewrote frontend sections of the Shopify Partner Dashboard by converting the codebase from **Ruby on Rails** to **React (JavaScript)**, while employing Shopify's newer design philosophy. This dashboard is used by millions of users daily.

### Magnet Forensics

Software Engineer

Sep. 2021 - Dec. 2021

- Worked on the STS (Systems, Tools, and Software) Team; personally ensured that tools and stack were active and online daily to be used by different Engineering departments, such as **Jenkins, PRTG, Azure DevOps, Jira**, and the **100s of machines in our build-farm**.
- Focused on the Build Dashboard, adding new features to help others perform tests and case evaluations for products deployed on the field. This was mainly with **React & Redux (JavaScript)** and **C# (ASP .NET & SignalR)**, for over **100 Engineering employees** to be used daily.

### Wilfrid Laurier University

Instructional Teaching Assistant

Sep. 2020 - Dec. 2023

- Responsible for proctoring and teaching students key concepts in the following courses; **Introductory Python, Introductory Data Structures, Advanced Data Structures, ARMv7, Microprocessors, and Foundational Computer Science** through multiple 3-hour lab sessions per week, for an average attendance of **20-100 students** per session depending on the course.
- Graded an average of **400 total assignments** over a semester for 100 students for Foundational Computer Science, the most abstract and fundamental computer science course.

### Freelance Development

Fullstack Developer

Apr. 2012 - Dec. 2022

- Wrote software for different clients through a variety of online platforms for an estimated **80 clients**, the software mostly being written using **Java 8** and **Maven**.
- Specialized in creating modifications and additions for game servers with **750 - 50k players** per player base.
- Organized client information through invoicing and CRM software.

## EDUCATION

### Honours BSc Computer Science

Wilfrid Laurier University

Sep. 2019 - Dec. 2023

### Applied Mathematics Option

Wilfrid Laurier University

Sep. 2019 - Dec. 2023

## TECHNICAL SKILLS

### Languages

JavaScript, TypeScript, C, C#, Python, Java (6-11), C++, Ruby, CSS, HTML, TeX

### Frontend Frameworks

React, Vite, Redux, Bootstrap, Mantine, Chart.js, D3.js, jQuery

### Backend Frameworks

ASP.NET, Express.js, Django, Fastify, Discord.js, Discord.py, Ruby on Rails

### Miscellaneous Frameworks

GraphQL, REST, Numpy, Seaborn, Matplotlib, scikit-learn, OpenMPI, GNU MP, Android Studio, NLTK

### Tools

Git, Jenkins, Maven, Gradle, Docker, Notion, Jira, Trello, Notion, PRTG, Figma, Canva, LaTeX

### Cloud

**AWS:** EC2, S3, Lightsail

**Microsoft Azure:** DevOps Services, AI & ML Services

**Google Firebase:** Cloud Functions, Authentication, Hosting, Storage

### Game Development

LibGDX, LWJGL, OpenGL, Pygame, Box2D, Ashley/Artemis ECS, Unreal Engine 4 & 5, Unity, Three.js

### Databases

Cloud Firestore, MongoDB, SQLite, MySQL, MariaDB, Redis

## EXPERIENCE & PROJECTS

### HawkHacks

President & Founder

Jan. 2023 - Apr. 2023

- Led one of Canada's largest hackathons - a team divided into engineering, finance, corporate outreach, logistics, design, and marketing departments. This responsibility entailed managing a first-time hackathon in 2022, with an **executive team of 30**, and with **825 registrants, 750 attendees, 14 sponsors**, and **\$26K+ in prizes**.
- The 2024 hackathon will be an in-person hackathon, being worked on by **45 executives** with an expected **attendance of 300-600** and an estimated total **budget of \$25K - \$30K**.

### Laurier Computing Society

VP of Operations & Internal Affairs

Apr. 2023 - Present

- Help transition the society to new leadership by formalizing many of the ad-hoc processes that the club uses, as well as helping manage various HR-related inquiries.

President

Apr. 2021 - Apr. 2023

- Restructured, revamped, revitalized, and led one of Canada's largest university computer science societies - a team divided into a communications, finance, events, engineering, outreach, and marketing department. This responsibility entailed managing a team of **56 executives** and a community of more than **3500 students**.
- The club produced various computer science-oriented events and initiatives. with an average of **30-40 events per year** and **50-300 attendees per event**.

### Computing Councils of Canada

Co-Founder & Director of Systems Administration

Oct. 2020 - Mar. 2023

- Worked as a high-level executive and one of the founding members at the Computing Councils of Canada, being involved in every department to ensure ample infrastructure was set up as a newly-founded non-profit organization, and ensured that tasks were completed.

### Spotify AI Album Cover Generator

Full-Stack Website Project

Dec. 2023 - Present

- Developing a full-stack application using **React (TypeScript)**, that allows users to submit a link to a playlist and set some preferences to use **OpenAI's DALL-E** AI image generation to generate album covers.

### Solar System Differential Simulation

Research Project

Sep. 2023 - Dec. 2023

- Created a visual 2-dimensional solar system simulation in Python using **Pygame** to model the movement of various celestial bodies in the solar system with respect to time using basic 2-dimensional differential equations.

### MuSpace

Social Media Website

May. 2021 - Aug. 2021

- Created a social media platform that connects people based on their musical listening tastes - responsible for managing and delegating tasks in a group of 12 people in an Agile environment over the course of 4 months for a Software Engineering class.
- Architected specific coding and design patterns for a **React (JavaScript)** frontend and ensured developers and UI designers were delegated specific tickets to work on specific components, pages, and sections.
- Implemented the **Spotify Web API** and **OAuth2** to authenticate users and load listening data and trends, while using **Google Firebase** for data storage, authentication, hosting, and CI/CD.

## RECENT HACKATHONS

### HackTheNorth 2022

That's Crazy! - An accessibility-focused CLI written in **Python** using **AI and ML (speech recognition, NLP, and sentiment analysis)** to summarize text, generate freestyle song lyrics and create blog posts.

### RUHacks 2021

Kabo - A karaoke Discord bot written in **JavaScript** and **Python** for simulating karaoke with live pitch and lyrical correctness scoring using **Microsoft Azure's AI & ML Services (NLP)**.

### HackTheNorth 2021

Chaterest - A moderation Discord written in JavaScript bot that automates discussion moderation, and measures user interests using **AI and ML (speech recognition, NLP, and sentiment analysis)**.

## HONOURS

### Club of the Year

Presented to the Laurier Computing Society by the Faculty of Science Student Association for the 2022/23 academic year.

### President of the Year

Presented to the Laurier Computing Society by the Faculty of Science Student Association for the 2021/22 academic year.

### MLH Hackcon X Speaker

Invited to speak at a 3-day conference on the topic of starting your very first hackathon, to an audience of 400 organisers.

### Event of the Year

Presented to the Laurier Computing Society by the Faculty of Science Student Association for the 2021/22 academic year.

### Marketing of the Year

Presented to the Laurier Computing Society by the Faculty of Science Student Association for the 2021/22 academic year.