

# Bradley Herrera Contreras

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## Skills

**Programming** JavaScript, Python, C++, TypeScript, SQL, R, HTML, CSS  
**Tools** React, Node.js, Next.js, Git, InfluxDB, PostgreSQL, Docker, Redux, Material UI, SASS, SCSS

## Experience

### Full Stack Software Developer

Remote

Arcturus Networks

May 2023 - Aug 2023

- Spearheaded the **alpha launch** of our Computer Vision Surveillance app in **React** which **increased product exposure and interest** among **60+ industry leaders**.
- Enhanced the video analytics system by incorporating **object-oriented design in C++**, introducing **20+ user-configurable parameters** while ensuring low-latency updates to the video stream.
- Developed a new statistics dashboard by integrating the backend with **InfluxDB** and **PostgreSQL** via **socket.io**, enabling real-time updates of critical time series data that provide summarized insights.

### Performance Analyst

Remote

Desjardins

Jan 2022 - Apr 2022

- Performed **exploratory data analysis** on over 20 large-scale datasets to analyze and quantify business performance.
- Shared over **10 scripts** in **SQL** and **SAS** that streamlined data manipulation **saving 25%** more time.
- Optimized financial investments of over **\$50,000** by delivering **10 presentations** highlighting data-driven insights.

## Projects

### Visual Scroll Article: Explore the STEM Gender Gap 📄

- Designed a scrollytelling article using **React** and **TypeScript** that explores the STEM gender gap across the world.
- Created **7 interactive data visualizations** using **D3.js** that allow users to explore the data with custom widgets.

### Waterloo Data Science Club Website 📄

- Launched the club website using **React** and **Next.js** while leveraging **Git** for version control across the team.
- Accelerated future updates by **50%** using **JavaScript** and **APIs** to dynamically cast data and automate social media.
- Implemented **Material UI**, **SASS**, and React components in design decisions to contribute **high quality code**.

### Interactive Glucose Visualization Dashboard 📄

- Developed the pre-processing of over 2 years of my Type 1 Diabetes glucose data using **Python Pandas**.
- Created an **interactive dashboard** including 3 plots, 1 interactive table, and 2 search widgets using the Panel library.

## Leadership

### Frontend Engineer 📄

Waterloo, ON

Hack the North

Mar. 2023 – Present

- Launched a user-friendly Hacker Application website, securely **hosting 6,000+ applications** for our 2023 event.
- Engineered QR code-enabled digital tickets which **automated registration for 1,100+ attendees**, yielding a **67% reduction** in sign-up time and delivering a seamless registration process.
- Built the Hack the North website and dashboards using **React** and **TypeScript** for **1,000+ hackers** and **50+ sponsors**.

### Tech Lead

Waterloo, ON

Waterloo Tech+

Jan. 2023 – Present

- Redesigned a **Python** program to match over **40 students** every term with mentors based on common interests.
- Guided cross-functional collaboration for the redesign of Tech+'s backend portal to improve the user experience.

### Lead Developer

Waterloo, ON

Waterloo Data Science Club

Aug. 2021 - Jan. 2023

- Founded the Development Team to build technical community projects **increasing student engagement by 30%**.
- Led a team of **7 developers** in the creation of a modern website and Discord Bot to boost social media interactions.
- **Reallocated over \$2,500** in spending to successfully organize a Club hackathon with over **50 participants**.

## Education

### University of Waterloo & Wilfrid Laurier University

Waterloo, ON

Bachelor of Computer Science & Bachelor of Business Administration

2020 - 2025

- Relevant Coursework: Data Structures, Algorithms, Object Oriented Software Development, Operating Systems
- Languages: **English** (Native), **French** (Fluent), **Spanish** (Fluent)