Bradley Herrera Contreras

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Skills

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

Experience

Full Stack Software Developer
Remote

Arcturus Networks
May 2023 - Aug. 2023

- Spearheaded the **alpha launch** of our Embedded Computer Vision Surveillance app in **React** which **increased product exposure and interest** among **40 industry leaders** and over **500 potential customers**.
- Enhanced the **Computer Vision** algorithm by incorporating **object-oriented design in C++**, introducing **20+ user-configurable parameters** that provide the full range of controls and low-latency updates.
- Built a dynamic statistics dashboard by expanding **REST APIs** and using **socket.io** to display vital time series data from **InfluxDB** and **PostgreSQL**, optimizing algorithms and queries that **accelerated data retrieval** by **45%**.

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** on web, Apple wallet, and Google wallet which **automated registration for 1,800+ attendees**, yielding a **67% reduction** in sign-up time.
- Built the Hack the North website and dashboards using **React** and **TypeScript** for **1,000+ hackers** and **50+ sponsors** generating over **25,000 visitors** in 2 months.

Tech Lead
Waterloo, ON

Waterloo Tech+
Jan. 2023 – Aug. 2023

- 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, Operating Systems
- Languages: **English** (Native), **French** (Fluent), **Spanish** (Fluent)