

# JOYCE WANGSA

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## EDUCATION

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**University of Waterloo** - Bachelor of Mathematics, Minors in Computing & Statistics 2024

- Coursework: Algorithmic Problem Solving, Databases, Data-Intensive Distributed Analytics, Data Types & Structures
- Involvement: UW Blueprint, Waterloo Data Science Club, Culture & Language Association, SoGal Waterloo Chapter

## SKILLS

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**Programming** | JavaScript, TypeScript, Python, R, SQL, HTML/CSS

**Technologies** | Apache Spark, React, Redux, Next.js, Flask, REST, Pandas, NumPy, Matplotlib, tidyverse

**Tools** | Git, SVN, PostgreSQL, VS Code, Figma, Docker, Google Analytics & Data Studio

## EXPERIENCE

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**Software Engineer | Alstom** **May 2023 - Present**

*Train Management System* JavaScript | C# | SVN | Python | Bulma | CSS | CANalyzer | TeamCity | Redmine

- Revolutionized a WinForms-based system with a React and full-stack overhaul, merging SignalR and Redux to slash signal latency from **11s** to **1s**, boosting efficiency by **90%**
- Incorporated React higher-order components to standardize user interactions and reuse component logic, ensuring application-wide consistency and reducing development time by **95%**
- Devised automated testing and visual documentation using Selenium for **100+** test cases, cutting the team's testing cycle time by **97%** and eliminating manual errors
- Optimized CAN communication within the system using CANalyzer, ensuring data integrity and system reliability
- Facilitated requirement reviews with project managers, aligning development with client expectations for improved delivery

**Software Engineer | Del-Coin** **Sep 2023 - Dec 2023**

*Platform for personalized, message-driven apparel* JavaScript | PM2 | Jade | CSS | MySQL | EC2

- Optimized a high-traffic web application; identified performance bottlenecks and refined content delivery, achieving a Google PageSpeed score of **100**
- Automated deployment using industry best practices, which **eliminated** site downtime and bolstered reliability
- Deployed a REST API for authentication and automated email notifications, enabling secure login, personalized communication, and user verification processes

**Managing Director of Engineering, Front-End Engineer | Global Spark** **May 2022 - Aug 2023**

*World's first multidisciplinary hackathon* JavaScript | MUI | Git | Figma

- Championed engineering perspectives at the executive level, leading a team of **6** engineers across **2** products; pioneering best practices such as code reviews, continuous integration and testing methodologies
- Owned the development of the community page to engage **4000+** users for the world's first multidisciplinary hackathon; emphasizing code agility and maintainability
- Translated designs into interactive pages, delivering accurate and visually appealing user experiences
- Engineered reusable, robust components for dynamic data population, empowering non-developers to easily modify information, enhancing system flexibility and user autonomy

**Software Developer | UW Blueprint** **Jan 2023 - Apr 2023**

*Supportive Housing of Waterloo* TypeScript | ChakraUI | Git | Docker | Figma

- Revolutionized resident management by creating an interactive dashboard, eliminating manual processes and streamlining data management which enabled the organization to better allocate resources and enhance decision-making capabilities

## PROJECT

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**Course Reviews Visualization** Python | Pandas | NumPy | Matplotlib | NLTK

- Generated text embeddings using transformers and principal component analysis for dimensionality reduction
- Developed a sentiment analysis model to categorize course reviews into positive, neutral, and negative sentiments
- Utilized statistical methods to analyze uwflow.com data to generate insights through various plots, Instagram post was the week's most liked