

Royce Mathew

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Skills

Languages Python 5 years, Lua 4 years, Java 3 years, JavaScript 3 years, SQL 2 years, C++ 1 year, Rust 1 year, Assembly, C#, C

Technologies Bash, Docker, Firebase, Flask, Google Cloud, Git, Jenkins, Linux, Numpy, OpenShift, Pandas, Postgres, PyTorch, Raspberry Pi, React, REST, SASS, Selenium, SSH, Tensorflow, UML, Vercel

Experience

Cloud Developer • RBC Royal Bank of Canada

Jan 2024 - Aug 2024

- Developed and managed an internal application that handles SQL database batch read, writes, and views, using **Next.js** and **TypeScript** and **Microsoft SQL** for Backend.
- Implemented an authentication **system** with **Microsoft Entra ID** which allows users to securely log in to the website with a unique token that is valid for a day.
- Enabled the website to automatically scale according to the demand and load, with features such as **load balancing**, horizontal auto-scaling, and **containerization**.
- **Implemented a secure and automated CI/CD pipeline with Jenkins**; This pipeline included vulnerability checks to identify potential security issues in dependencies and unit tests to ensure code functionality. The pipeline automated deployment of the project on the OpenShift platform.

Teaching Assistant • Ontario Tech University

Sep 2023 - Dec 2023

- Offered individualized support to students through office hours, addressing their questions and concerns related to course content, assignments, and projects.
- Supported the integration of new technologies and tools into the course, such as **cloud computing** platforms and development environments, to enhance the learning experience.
- Mentored and guided students in their project work, helping them develop practical coding skills and complete software projects that demonstrate their understanding of course concepts.

Technical Operations Intern • Modern Deploy Technology

May 2023 - Sep 2023

- Designed and developed a robust web application leveraging **cloud storage**, allowing users to effortlessly upload, manage, and access documentation securely with a **secure authentication system**.
- Created an intricate and **responsive** user interface using **Svelte** and **TypeScript**, ensuring an intuitive and **dynamic user experience**.
- Implemented Supabase, a **Postgres** database, along with **Vercel**, as a key component of the project, showcasing efficient **data management** and seamless integration.

Projects

r0yce.com/projects

Kanjou

Firebase • NextJs • React • Typescript

- Kanjou is a cutting-edge **collaborative text editor** created using the robust framework of NextJS and the scalable **Firebase** platform. The tool has an array of features designed to enhance user experience and productivity.
- Seamless Integration for syntax highlighting for improved code readability, an **automatic saving** mechanism to prevent data loss, and a comprehensive suite of shortcuts to expedite workflow. Moreover, the platform facilitates real-time collaboration by allowing users to share documents and edit them concurrently.

Research Paper on Neural Networks

Python • Jupyter Notebook • NEAT

- Research Paper on utilizing **Neural Networks** to predict the foreign exchange market. Study delves into the application of genetic algorithms such as NEAT (NeuroEvolution of Augmenting Topologies) to generate accurate market predictions.

Open Source API Wrapper

Rust • Asynchronous • Github Actions

- Asynchronous Rust API Wrapper for Roblox endpoints - **rust library** that prioritizes memory safety and sends requests to web endpoints, while also allowing for cookie-based authorization.
- The wrapper seamlessly integrates users, groups, games and payment services into Rust-compatible formats with **deserialization** for easy access and manipulation. This wrapper was originally written to be implemented into my backend server running on RaspberryPi.

Education

Ontario Tech University

Sep 2021 - May 2026

Bachelors Of Science - Computer Science

- Dean's Honors List 2022 • President's Honors List 2022
- Data Structures and Algorithms, Computer Architecture, Computational Photography, Software Design and Analysis, Computational Science, Programming Languages, Software Systems Development and Integration