Royce Mathew

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Experience

Cloud Developer • Royal Bank of Canada (*RBC*)   Jan 2024 - Aug 2024

- Developed an app with **React**, **TypeScript**, and **MSSQL** used by **50+** developers and compliance teams to track vulnerability scores for **15,000+** enterprise devices.
- Integrated **Azure Entra ID** with **ServiceNow** ticket validation for secure, traceable access control.
- Built a cloud infrastructure using **Docker** and **OpenShift** with automated horizontal scaling and load balancing.
- Reduced query time by **~30%** through **caching** and **SQL optimization**.
- Automated CI/CD with **Jenkins**, **Vault**, **SonarQube**, and **Artifactory**; added unit tests with **Generative AI**.

Teaching Assistant • Ontario Tech University   Sep 2023 - Dec 2024

- Mentored **100+ students** on cloud systems and distributed software.
- Introduced **Jupyter Notebook** and other tools to simulate real-world development.
- Reviewed codebases, giving feedback to improve performance + maintainability.

Technical Operations Intern • Modern Deploy Technology   May 2023 - Sep 2023

- Built a document management web app using **Svelte** + **TypeScript**, with secure access via **Supabase** auth.
- Integrated **Postgres** and deployed with **Vercel** to ensure responsive UX and real-time sync.

Projects

r0yce.com/**projects**

Kanjou - Cloud Powered Collaborative Editor   Firebase • NextJs • React • Typescript

- Developed real-time collaborative text editor supporting concurrent multi-user editing with conflict resolution with **React** and **Firebase**.
- Implemented **rich text editing** with **syntax highlighting** for **20+** programming languages using Tiptap editor.
- Achieved **<100ms** latency for real-time document updates using Firebase onSnapshot listeners.
- Built custom **middleware** solution for Firebase adapter authentication in Next.js serverless environment.

High-Frequency Forex Trading Bot   Python • Pandas • NumPy • REST APIs

- Built a data driven trading bot that analyzes high-frequency foreign exchange market data and detects signals via custom indicators and **pattern analysis**.
- Developed core logic to compute trend reversals, volatility breakouts, and price action based anomalies.
- Integrated a machine learning model to enhance predictive performance using custom features derived from volatility, price action, and trend reversal signals and multiple simulations.

Education

University of Ontario Institute of Technology   Sep 2021 - Dec 2025

Bachelor of Science (Honours) in Computer Science - 3.89 GPA

- Dean's and President's Honors List 2022 - 2025
- **Relevant Coursework:** Software Design & Integration, Algorithms & Data Structures, Computer Architecture, Computational Photography, Programming Languages, Machine Learning, Compilers, Systems Programming

Skills

Languages: Python, Java, Rust, Go, JavaScript, SQL, C++, C#, C, Assembly, Lua

Frameworks & Tools: React, Next.js, Flask, Docker, Jenkins, Git, REST APIs, Svelte, Selenium, Bash

Cloud Platforms: Google Cloud, Microsoft Azure, Firebase, Red Hat OpenShift

DevOps & Security: HashiCorp Vault, SonarQube, Artifactory

Data & ML: PyTorch, TensorFlow, Scikit-Learn, Keras, Pandas, NumPy, PostgreSQL, MSSQL