

Ridvik Pal

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Skills

Languages: C#, TypeScript, JavaScript, Java, Python, C++, SQL, Microsoft VBA

Frameworks/Libraries: .NET Core & Framework, React, Redux, Node.js, Spring Boot, FastAPI, NumPy, PyTorch, Pandas, Playwright

Tools: AWS, Docker, Kubernetes, Windows, Linux, MS SQL Server, Jira, Confluence, Git, GitHub, PostgreSQL, GitHub Copilot

Concepts: Fullstack Web Design, REST APIs, Testing, DevOps, Agile, Machine Learning, Neural Networks, Financial Markets

Work Experience

Intern Engineer

May 2024 - Aug 2025

Xero - Toronto, ON

- Developed a GET REST API endpoint using C#, .NET, and SQL to allow the JAX Generative AI Agent to retrieve inventory item data, enabling the automated creation of invoices and purchase orders for 500+ users.
- Modified a GET REST API endpoint using C#, .NET, and SQL to allow retrieval of up to 50 deleted inventory items for historical reporting, fulfilling a key customer request for accurate and complete reports.
- Enhanced a GET REST API endpoint using C# and .NET, alongside frontend changes in React and Redux, to enable users to bulk print up to 25 purchase orders at a time into a single PDF, significantly improving user workflow efficiency.
- Architected and implemented a new Product Categories feature using C#, .NET, React, and Redux, enabling customers to group inventory items and increasing Xero's competitiveness with Intuit Quickbooks and Sage Accounting.
- Spearheaded a codebase modernization effort for a legacy React input form microfrontend, refactoring over 23,000 lines of code and updating 40+ packages to reduce load times by 60% and increase maintainability.
- Implemented a new data layer for the Xero Purchase Orders homepage table using React, Redux, and RTK Query, providing users with 13 different ways to analyze purchase order data, including filtering, searching, sorting, and pagination.
- Engineered and implemented item filtering capabilities in Xero Products and Services using React and Redux, giving 500,000+ customers 16 new filtering options.
- Refactored and optimized Redux state management across multiple SPAs, eliminating duplicate and complex data structures, which improved performance by 25% and enhanced codebase maintainability.
- Developed and deployed a synthetic monitoring system using Playwright and TeamCity to establish end-to-end testing across all user workflows every 30 minutes, achieving 100% coverage with 55 integration tests and significantly reducing production downtime.
- Authored and maintained comprehensive Confluence documentation for local development environments, which reduced onboarding time for new engineers by 50% and streamlined the debugging process for broken environments.
- Automated CI/CD pipelines with TeamCity and GitHub Actions, deploying containerized apps to AWS EKS and static resources to AWS S3.
- Closed 140+ Jira tickets and merged 100+ pull requests into production as a top contributor to codebase uplifts and feature development.
- Managed team Agile sprints and regularly presented progress updates during sprint reviews and company-wide all-hands meetings.

IT Systems Assistant

May 2023 - Sep 2023

Ministry of the Solicitor General - Toronto, ON

- Automated creation of Excel database worksheets by programming VBA scripts, saving the JVN team 3 hours of work time each day.
- Generated daily data analytics reports processing, validating, and cleaning 1000+ lines of raw data on the operation of Cisco codecs utilizing Excel power queries.
- Created and updated data for 1000+ configuration items (CIs) in the configuration management database (CMDB) via the BMC Remedy Asset Management Console.
- Updated and managed project documentation for 100+ projects.

Tutor

Jul 2022 - Jul 2025

Varsity Tutors - Remote

- Tutored 70+ students ranging from high school to university level, specializing in mathematics, physics, and computer science.
- Achieved a 5-star rating, receiving glowing recommendations from students and their parents.

Education

University of Toronto

Sep 2021 - Jun 2026

B.A.Sc. Major in Computer Engineering with Double Minor in Artificial Intelligence (AI) Engineering and Engineering Business

Certifications

Amazon Web Services

AWS Certified Developer - Associate (DVA-C02)

Mar 2025 - Mar 2028

Projects

Examiner

- Typescript/Python chrome extension to automatically grade & evaluate assessments using the OpenAI ChatGPT-4o model, built using React and FastAPI.
- Supports grading exams and quizzes located in files, extracted from webpage HTML, or submitted via online forms on the University of Toronto Quercus website.

MarkedUp

github.com/ridvikpal/MarkedUp

- Python desktop stock market app inspired by Yahoo Finance, built using the TwelveData REST API and PyQt5 GUI library.
- Supports stock quotes for over 20,000 stocks, interactive candlestick charts, smart autocomplete equity search, favourites watch list, light/dark GUI themes, and internal multithreading.

CarCartAPI

github.com/ridvikpal/CarCartAPI

- Java REST API built using Spring Boot that retrieves used car listings, updates used car listings, and provides car information utilizing the OpenAI ChatGPT-3.5 Turbo AI model.
- Supports GET, PUT, POST, DELETE requests with fully multithreaded calls.

RainyDay

github.com/ridvikpal/RainyDay

- Java weather app built using a JavaFX GUI and a modular backend weather API.
- Supports current and future weather for over 1,000,000 cities, weather alerts, user notifications, 15 different light/dark themes and touch input.

SimplyTrack

github.com/ridvikpal/SimplyTrack

- Python Financial tracker app that stores financial data in a MySQL database with a GUI built in PySimpleGUI.
- Supports AES 256-bit encryption, data visualization with matplotlib, CSV data import, light/dark GUI themes, bulk data modification and manual data entry.

MatchMap

- C++ GIS mapping software built for Debian Linux using the OpenStreetsMap database and GTK3 GUI library.
- Supports car routing, 19 international cities, multithreading, distinct colour scheme, light/dark GUI themes, and advanced search features.

References

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