

# RITIK KESWANI

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## EDUCATION

### University of British Columbia

Bachelor of Science, Major in Computer Science

Vancouver, BC

Sep 2019 – Present

- GPA: 3.9/4.0, Average: 84%
- Teaching Assistant for Computer Systems, Software Construction and Data Structure and Algorithms
- Designated Tutor for the Bachelor of Computer Science Program at UBC.
- Relevant Courses: Software Engineering, Algorithm Design and Data Structures, Computer Systems, Relational Databases, Artificial Intelligence, Computer Graphics, Computer Vision

## EXPERIENCE

### Full Stack Developer

Jan 2023 – Present

D2L

Kitchener, ON

- Enhanced the efficiency of D2L's Rubrics auto-save feature by optimizing data row generation and event sequencing to provide an accurate and condensed record of user interactions.
- Led performance testing and telemetry-based metric generation for Grades Mastery View, strengthening data-driven decision making and enhancing overall application performance.
- Crafted and executed frontend unit tests for the revamped Outcomes Management page, safeguarding feature integrity and consistency throughout the migration from a microservice to a monolithic architecture.
- Leveraged corporate training on secure coding practices to identify and rectify instances of potential XSS vulnerabilities within D2L's codebase, thereby significantly enhancing application security.
- Unearthed and fixed a long-standing backend inconsistency in the Hypermedia APIs, resolving a series of persistent defects and contributing to improved stability and user experience.

### Software Development Engineer

Sep 2021 – April 2022

Change Healthcare

Richmond, BC

- Maintained and enhanced the existing versions of Change Healthcare's proprietary software, fixing 10+ issues using **.NET** and classic ASP code writing in **C#** and **JavaScript**.
- Ported 30+ code fixes for Change Healthcare's upcoming software release, implementing backend services, web services, and SPA web clients.
- Wrote install scripts and developed, tested, and maintained software packages with code fixes for troubleshooting by the QA team and distribution to user desktops.
- Formulated a novel approach to perform package requirement checks when packaging bug fixes, eliminating the need for redundant **batch scripts** to do the same task.
- Streamlined the **PTF packaging** process through a concise and convenient **Confluence** page for internal use.

## TECHNICAL PROJECTS

### CourseGPT | Node.js, Express, React, MongoDB

Sep 2022

- Engineered 'CourseGPT', an AI-driven educational app utilizing GPT-4 API, designed on MERN stack and deployed on Heroku. The app is trained on course material, acting as a personal tutor for student inquiries.
- Implemented key features such as user registration/login, interactive Q&A interface, chat history viewing, feedback system for continuous improvement, and profile management.
- Expanded app functionalities to include chat history deletion, course favoriting, suggestive prompt generation, and allowed professors to upload course material, enhancing the AI's training data.

### Insight UBC | Node.js, TypeScript, Mocha/Chai

Sep 2022

- Developed a web platform using **TypeScript** to query data on over 5000 UBC Courses and 70 Buildings.
- Performed black-box testing with 90% code coverage using the **Mocha/Chai** testing suite.
- Created a frontend with **HTML/CSS** and **Javascript** and allowed backend access through **REST** endpoints.

### Investment Portfolio Manager | PHP, SQL, Oracle DB

Jul 2022

- Developed a full-stack investment portfolio management web app using **PHP** to track the user's investments in stocks, cryptocurrencies, and real estate.
- Designed a normalized database using **SQL** and **Oracle DB** to access the app data

### Game of Chess | Java, Swing, JUnit

Sep 2020

- Developed a full-stack Chess app using **Java** and **Swing** featuring a playable board and panels to display move history, killed pieces and save/load game.
- Created and parsed **JSON** files to implement save/load capabilities.
- Performed extensive **JUnit** testing to ensure 100% code coverage and adhered to software design principles to optimize robustness.

## TECHNICAL SKILLS

### Languages:

Java, C++, C#, C, Python, TypeScript, JavaScript, HTML/CSS, SQL

### Frameworks & Libraries:

Node.js, .NET, Swing, Three.js, OpenGL, NumPy, SciPy, Matplotlib, scikit-learn

### Testing & Databases:

Mocha/Chai, JUnit, MySQL, Oracle

### Tools & Technology:

Linux, Git, REST, Agile Scrum, Azure DevOps, Visual Studio, VS Code, JetBrains Suite