

# Dhrubo Karmaker

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## TECHNICAL SKILLS

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**Languages:** Python, Java, SQL, JavaScript/TypeScript/HTML/CSS, Lua, C++

**Tools & Frameworks:** Spring, React, Node.js, Express, MongoDB, Firebase, Google Cloud Platform, Selenium, Docker

## EXPERIENCE

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### Backend Developer Intern

Sep. 2023 – Present

*Jostle*

*Vancouver, BC*

- Implemented optimized S3 file deletion logic, reducing storage costs by 30 % through asynchronous processing using app events, while removing all previous stale attachment files.
- Identified and rectified critical backend bugs involving JPA, enhancing system reliability and performance.
- Redesigned utility classes, mitigating dependency injection issues common in Spring applications by eliminating bean usage in static methods.

### Software Developer In Test Intern

Jan. 2022 – Aug. 2022

*Student Price Card Ltd.*

*Vaughan, ON*

- Developed and thoroughly documented a robust end-to-end website testing framework using Selenium.
- Wrote reusable Python test code that covered 90% of the cases required for regression testing.
- Facilitated automatic parallel testing in different browsers using Selenium Grid.
- Integrated the tests in the CI/CD pipeline using Docker and Google Cloud Run feature for stable deployment.

### Undergraduate Teaching Assistant

Jan. 2022 – Present

*University of British Columbia*

*Vancouver, BC*

- Mentored students on object-oriented feature development in Java, testing using JUnit, and debugging.
- Conducted office hours to teach software engineering principles which improved my communication skills, elevating my ability to articulate technical concepts.
- Attained 100% favorable rating from students who received my guidance.

## PROJECTS

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### etaGPT | *React, Express, Firebase*

May 2023

- Co-developed an innovative AI-based application, integrating a WhatsApp and Telegram bot overlay with OpenAI's GPT-3.5 language model to provide users with a variety of educational and entertainment services.
- Enhanced the app's knowledge base beyond its training limit by leveraging Google Search API and Axios library for web scraping, providing users with real-time updates on recent events.
- Designed an interactive React analytics page leveraging Firebase Events, providing insightful data on user activity and feature popularity to facilitate continuous bot optimization.

### CashTrack | *React, Express, MongoDB, JWT*

Dec 2022

- Architected and developed a full-stack web application that tracks users' monthly expenditures.
- Built a responsive React front-end and maintainable client-side code using state management hooks & routers.
- Utilized Express.js to build an optimized REST API and implemented JWT authentication.
- Implemented and integrated a MongoDB database to model and organize user transaction logs.

### Sudo.Stream | *HTML, CSS, Javascript*

May 2021

- Created a web application that allows users to generate a solution to a Sudoku puzzle.
- Designed an intuitive and responsive front-end with HTML and CSS.
- Implemented generative recursion, arbitrary arity trees, and backtracking search algorithm in JavaScript to efficiently calculate solution in an average of 1 second.

## EDUCATION

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### University of British Columbia

Vancouver, BC

*Bachelor of Science in Computer Science, GPA: 88%*

*Sep. 2020 – May 2025*