Jaiveer Tiwana

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EDUCATION

UNIVERSITY OF BRITISH COLUMBIA Vancouver, BC
Bachelor of Science in Computer Science 2020 - 2025

• **Relevant Coursework:** Data Structures and Algorithms, Software Construction, Advanced Relational Databases, Machine Learning, Computer Hardware & OS, Computer Networking, Video Game Programming

• **Activities:** Captain on Varsity Cross Country and Track & Field teams

• **Scholarships / Awards**: Lululemon Leadership Scholarship, Academic All-Canadian Award Recipient (Varsity athlete + A academic average)

TECHNICAL SKILLS

Programming Languages - Java, C++, Python, SQL, JavaScript, TypeScript, R
Web Development - HTML5, CSS, React, Flask, PHP
Tools/Environment - IntelliJ, VS Code, Github, MS SQL Server, OpenGL
Testing - JUnit, GDB, Promise Testing, Writing test plans

PROJECTS

BLACKJACK WEB APP May 2025 - June 2025

- Built a full stack blackjack game using **React** and **Flask**, supporting 10+ unique gameplay actions including split hands, dealer AI, bust detection, insurance betting, and win/loss conditions.
- Designed a polished UI with a responsive layout for cards and controls, including 2 separate result zones for split hands, and a smooth layout that adapts cleanly across actions.
- Integrated an audio system with state-based sound triggers, alongside autoplay handling for an immersive user experience.

Technologies: JavaScript, React, Flask, Python, HTML/CSS, VS Code

EXOPLANET EXPLORER SYSTEM Jan 2024 - June 2025

- Implemented complex **SQL** queries supporting multi-table joins, aggregation, and nested subqueries for in-depth exploration of exoplanetary data.
- Designed and integrated a relational schema modeling stars, galaxies, and planetary systems, ensuring referential integrity across 20+ interconnected tables.
- Built dynamic web pages using **PHP** & **HTML/CSS**, to allow user-driven data exploration and interaction.

Technologies: SQL, PHP, HTML/CSS, VS Code

RPG GAME Sep 2024 - Dec 2024

- Designed and developed a 2D turn-based combat RPG using **C++** and **OpenGL** for a video game programming course.
- Developed robust turn-based combat mechanics, including enemy AI, player skill systems, and an attack upgrade system, ensuring smooth state transitions and balanced gameplay.

Technologies: C++, OpenGL, VS Code

UBC COURSE FINDER Jan 2024 - Apr 2024

- Built a query engine to parse and query UBC course and room data.
- Implemented back-end controllers for parsing (**JSON/HTML**) and handling JSON-based queries.
- Developed a front-end interface for dataset selection & query execution using **TypeScript** & **JavaScript**.

Technologies: TypeScript, JavaScript, HTML5, Promise Testing, IntelliJ