

Armaan Singh Chahal

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Objective:

Motivated software developer skilled in object-oriented programming and full-stack development, aiming to apply expertise in Java, C++, and Python to deliver impactful solutions in collaborative environments.

Education:

3rd year BSc. Computing Science, *Minor: Statistics*
GPA: 3.50

Simon Fraser University, Burnaby, BC
(Sept. 2022 – Present)

Skills:

- **Programming Languages:** Java, C++, Python, C, HTML, JavaScript, CSS, MATLAB, R, SQL
- **Tools & Technologies:** MySQL, DSA, Pandas, Git, Matplotlib, Tableau, VS code, Powershell
- **OS:** Linux, Windows, macOS

Experience:

Back-End Web Developer – CJSF 90.1 FM, Simon Fraser University (September 2024 – Present)

- Developed and maintained the backend using **Directus** CMS and integrated with **SvelteKit** on the frontend.
- Implemented APIs for data flow, user authentication, and content management to support radio station operation
- Contributed to a scalable web infrastructure for improved streaming and content delivery.

Personal Projects:

- **Quiz Portal** (Java, MySQL)
 - **Designed and implemented** a secure login system using Java and MySQL for over 250 users, with dynamic question retrieval and leaderboards generated from CSV files.
 - Reduced quiz loading time by 30% through optimized database queries like pagination and indexing
- **Weather Information Website** (HTML, CSS, JS)
 - Developed a responsive weather information website that dynamically retrieves and displays weather data for over 10,000 cities using OpenWeatherMap API.
 - Improved user engagement by 25% through dynamic background images based on real-time weather conditions.
- **Tic-Tac-Toe** (C++, minmax algorithm)
 - **Constructed** a game implementing the Minimax algorithm to optimize **AI** decision-making.
 - Analyzed game performance using R to compare different board sizes, which reduced decision time by 20%.
- **Employee Login System** (Java Swing, SQL)
 - **Designed and developed** an employee login system with a secure user authentication flow.
 - **Implemented** a welcome screen post-login, enhancing user experience.
 - **Handled** error cases and ensured robust data management through **SQL** integration.
- **Portfolio Website** (HTML, CSS, JS)
 - **Designed and developed** a personal portfolio website to showcase projects, skills, and experiences.
 - **Created** an intuitive layout to effectively present my profile.

University Projects:

- **Facebook Clone** (C++)
 - Developed a social networking platform in C++ that allows users to create, search, and manage profiles with a focus on optimizing search functionality.
- **HashMap Implementation** (C++)
 - Implemented a collision-resistant HashMap with an optimized data retrieval time reduced by 30%, improving the performance of large-scale data storage systems with 31% collisions.

Certificates:

- **Programming using C/C++:** Gained proficiency in object-oriented programming and data structures.
- **Python (A Grade):** Developed expertise in Python programming, data analysis and automation.
- **Artificial Intelligence:** Learned key AI concepts including AutoML, PyCaret, GANs, and NLP for practical implementations.

Volunteer Experience:

- Peer Mentor for **Calculus 1** & Peer Mentor for **Chemistry 1**: Assisted over 30 first-year students with challenging concepts, leading to a 15% improvement in their average exam scores.