Ali Akbari

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EDUCATION

University of Calgary   **Calgary, AB**
Bachelor of Science in Computer Science   *Expected Graduation Date: May 2026*
● **Cumulative GPA:** 3.8/4.0
● **Awards**: Dean's List (2024), Jason Lang Scholarship (2024), Three Year Honour Society (2022)
● **Relevant Coursework**: Artificial Intelligence, Data Science, Data Analysis, Object-oriented programming, Data Structures & Algorithms, Computer Machinery, Information Security, Programming Paradigms

PROJECT EXPERIENCE

AI-Based Scheduling Optimization System   **Calgary, AB**
● Collaborated in a team of 5 to design and implement a search-based system in Python, optimizing the scheduling of games and practices while meeting hard constraints and minimizing soft constraint penalties for a sports organization
● Engineered and integrated a set-based search model that used an or-tree and a genetic algorithm to explore optimal scheduling solutions, leveraging efficient data structures and algorithms
● Developed a robust input parser to process complex constraints and assignments from structured text files, ensuring accurate interpretation and error handling

Bike Demand Analysis and Visualization   **Calgary, AB**
● Developed a Python-based data analysis application using Pandas and SQLite to categorize and analyze bike rentals, streamlining data handling by 40% through efficient data manipulation and categorization
● Leveraged SQL to construct views that calculated average rentals per temperature and season, enhancing data accuracy and ensuring optimized query performance
● Using Matplotlib created compelling bar charts to represent average rentals, enhancing insights with labeled axes, descriptive titles, and integrated gridlines, leading to a 50% improvement in readability
● Demonstrated problem-solving and analytical skills by addressing data inconsistencies and using data cleaning ensuring precise insights on bike rental demand patterns

Unity Endless Runner Game   **Calgary, AB**
● Using C# and Unity built a 3D endless runner game, integrating smooth movement mechanics and real-time collision detection, achieving 99% accuracy in object interactions
● Implemented various game mechanics such as player inputs, object collisions, and physics-based interactions, creating an engaging and dynamic user experience
● Implemented game progression elements such as increasing speed and difficulty over time, enhancing the replayability and challenge of the game

SKILLS & TOOLS

Skills: Python, Java, C, SQL, C#, HTML, CSS, Javascript, Assembly, Haskell, Prolog, Unit Test, UML

Tools: Git/Github, Linux/Unix, Tableau, VSCode, Matplotlib, Microsoft Office (Excel), Latex, Pandas

EXTRA-CURRICULAR ACTIVITIES

Competitive Programming Club   **Calgary, AB**
University of Calgary   *September 2023 - Present*
● Collaborated with a team of 3-4 students to tackle complex coding challenges, enhancing problem-solving skills with various data structures and algorithms
● Contributed to developing efficient solutions for coding problems, emphasizing performance optimization, algorithm complexity, and space utilization in Big-O notation
● Actively participated in mock competitions, working under time constraints to solve sets of programming problems, fostering teamwork and time management