

Alexander Potiagalov

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EDUCATION

Simon Fraser University

Bachelor of Applied Science in Computing Science, Minor in Business

Burnaby, BC

Sept. 2023 – Dec. 2027 (Expected)

- GPA: 3.7/4.0

EXPERIENCE

JavaScript Developer, SFU Marketplace Project

Nov. 2024 – Present

Simon Fraser University

Burnaby, BC

- Designing and developing a full-stack **e-commerce and messaging platform** tailored for SFU students.
- Implementing **user authentication**, item listings, and messaging using **React**, **Node.js**, and **MongoDB**.
- Collaborating with a team to create a user-friendly interface and robust backend infrastructure.

Backend Software Developer, HEX (Horizon Expedition)

Sep. 2024 – Present

Simon Fraser University

Burnaby, BC

- Designed and implemented inventory management and object interaction systems for a **Unity** game.
- Collaborated with **front-end** developers to ensure smooth integration of **back-end** logic and **UI**.
- Utilized **C#** to optimize game performance and ensure scalability for future features.

President, Computer Science and Video Games Clubs

Sept. 2021 – June 2023

R.A. McMath Secondary School

Richmond, BC

- Organized and ran 5+ coding **competitions** and **gaming events** with 20+ participants.
- Led workshops to enhance members' programming skills on **Python**, **JavaScript**, and **game development**.
- Taught club members how to create **mods** in Minecraft and Roblox, enabling them to make their own games within those platforms.

PROJECTS

AVL Tree Implementation | C++

Dec. 2024

- Designed and implemented a fully functional **AVL Tree class** to ensure balanced binary search operations.
- Included features such as **insertion**, **deletion**, **rebalancing**, and **height tracking** with thorough testing.
- Optimized for efficiency, achieving **logarithmic time complexity** for search, insert, and delete operations.

Mastermind Game Variant | C

Jan. 2023

- Developed a Mastermind-style game where players guess a sequence of numbers and receive detailed feedback.
- Implemented **memory allocation** to save previous guesses and provide feedback on exact/partial matches.
- Utilized **Valgrind** to check for memory leaks, ensuring efficient memory management

Billboard Top 100 Songs Analysis | Python, Pandas

Oct. 2023

- Built a **Python**-based tool to analyze trends in Billboard's Top 100 charts using **Pandas** for data manipulation.
- Enabled users to quickly **retrieve** and view chart history for specific songs and artist performance over the **years**.
- Designed a robust system to efficiently handle and analyze **large data files**.

TECHNICAL SKILLS

Languages: Python, C, C++, C#, JavaScript, MATLAB, HTML/CSS

Libraries/Frameworks: NumPy, React, Pandas, Flask

Tools: GitHub, VS Code, Visual Studio

Other: Fluent in French, Russian, and English