# Sheikh Safwan Hossain

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#### EDUCATION

Bachelor of Science - Computing Science with Specialization in Software Practice Sep. 2021 - Apr. 2025

University of Alberta

Edmonton, AB

#### Relevant Coursework:

Web Applications and Architecture (CMPUT 404), Introduction to Software Engineering in Java (CMPUT 301), Operating System Concepts (CMPUT 379), Advanced Games Programming in C++ (CMPUT 350), Non-Procedural Programming Languages (CMPUT 325), Introduction to File and Database Management (CMPUT 291), Algorithms (CMPUT 204), Practical Programming Methodology in C (CMPUT 201), Computer Architecture and Organization (CMPUT 229), Game Artificial Intelligence in C# (CMPUT 256), Discrete Mathematics (CMPUT 272).

## Game Development Certificate

Sep. 2021 - Apr. 2025

University of Alberta

Edmonton, AB

A certificate for completing discipline-specific studies with courses that give opportunities to work in multidisciplinary teams, build complete small and medium-scale games, and interact with the game industry.

## Projects

NexaPulse | Python, Django, Svelte, JavaScript, HTML, CSS

Jan. 2024 - Apr. 2024

- Developed a full-stack Distributed Social Networking web application in CMPUT 404 with **Django** serving a REST API on the back-end and **Svelte** on the front-end.
- Implemented node-to-node connections with two external servers, similar to Threads and Instagram, and utilized AJAX for dynamic content loading.
- Transitioned from **SQLite** (development) to **PostgreSQL** (production) for database management and deployed the web application on **Heroku**.
- Practiced Scrum and used Git and GitHub for collaboration and task management.

BlackBox | Java, Android Studio

Sep. 2023 – Dec. 2023

- Developed an inventory management Android application in CMPUT 301 using Java and Android Studio.
- Utilized Git and GitHub for version control.
- Practiced Object-Oriented Programming and Agile Methodologies.
- Used **Figma** to make a prototype of the application's UI.

Four-Colour Map Theorem Solver | Python, Flask, Next.js, scikit-image, clingo

Sep. 2023 – Sep. 2023

- A two-day hackathon (DevelopEd 2.0) collaborative web application that shows a graph-based solution to the Four-Colour Map Theorem.
- Built using Next.js (with React.js and Tailwind CSS) and p5.js on the front-end.
- Used Flask, scikit-image (image processing), and clingo (answer set programming) on the back-end.

# EXPERIENCE

Mentor

UAlberta Future Creators

Sep. 2022 - Dec. 2022

Edmonton, AB

- Taught 10+ students in grades 7-12 how to design and build a website using HTML and CSS.
- Coordinated with a co-mentor to create workshop materials, improving teamwork skills.
- Ensured fair delegation of tasks, monitored students' progress, and resolved students' conceptual queries.

### TECHNICAL SKILLS

Languages: Python, JavaScript, C, C++, C#, Java, R, lisp, prolog, HTML, CSS.

Frontend Frameworks: Svelte, React. Backend Frameworks: Django, Flask. Android Development: Android Studio. DBMS: MongoDB, SQLite, PostgreSQL.

Game Engines: Unity, Godot.

Developer Tools: Git, GitHub, Linux, Heroku, RStudio.