Gursehaj **Singh**

Game Programming Resume

CONTACT

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EDUCATION

2021 – 2024
George Brown College, Toronto, ON
Advanced College Diploma
Game Programming
(GPA: 3.36/4.0)

Relevant Coursework:
Advanced Game Physics
AI for Games
Computer Graphics Programming
Game Engine Architecture
Mobile Game Development
Multiplayer Game Programming
Game Design Principles
Math for Game Development

TECHNICAL SKILLS

- **Programming:** C++, C#, Python, Blueprint scripting.
- **Engines & Frameworks:** Unreal Engine, Unity, SDL.
- **Software Development:** Version control (Git/GitHub), Agile, debugging, profiling, software testing.
- **Gameplay & Systems:** Physics simulation (gravity, collision, forces), AI programming (pathfinding, decision-making, combat behavior).
- **Graphics Programming:** DirectX, OpenGL, shaders, rendering, 3D math, lighting systems.
- **Data-Driven Development:** ScriptableObjects, Unreal DataTables, clean code architecture.
- **Platforms:** Experience developing for PC, mobile, and web.

OBJECTIVE

To obtain a game programming position where I can apply my skills in C++, C#, and game engine development to create innovative and engaging gameplay systems. Passionate about building polished, scalable, and data-driven gameplay mechanics inspired by industry practices.

PROJECT EXPERIENCE (Personal)

Weapon & Ammo System (Unreal Engine) (1 Month)

- Developed a data-driven weapon system with reusable Weapon Component class supporting both projectiles and lasers.
- Integrated ammo definitions, damage types, and data assets for scalable content authoring.
- Designed event-driven communication between gameplay and UI for responsive player feedback.

Status Effect System (Unreal Engine) (3 Weeks)

- Created a stackable, reactive status effect system inspired by Pokémon and Final Fantasy.
- Implemented FStatusEffect and runtime instances, enabling burn, freeze, and combined reaction states.
- Built reaction rules via DataTables (e.g., fire + ice = steam) to allow flexible designer-driven logic.
- Encapsulated logic in a reusable AC_StatusComponent for clean modularity.

Quest & Dialogue System (Unity) (1 Month)

- Designed a quest progression system supporting simple quests, prerequisites, and interlinked multi-stage quests.
- Integrated quest states with dialogue triggers, animations, and events for immersive storytelling.
- Built editor-friendly structures using custom classes and ScriptableObjects.

Day/Night & Seasonal Systems (Unity) (2 Months)

- Built a time manager tracking days, months, years with adjustable real-time scaling.
- Implemented dynamic lighting transitions for day, afternoon, evening, and night.
- Added season blending logic, including leap year handling and smooth environment transitions.

HIGHLIGHTS OF QUALIFICATION

- Strong problem-solving skills and ability to collaborate in team-based environments.
- Deep understanding of gameplay systems design including mechanics, player psychology, AI, and level design.
- Skilled communicator, able to explain technical concepts clearly to non-technical team members.
- Experienced with game development tools and pipelines, including animation, physics, VFX, and scripting.
- Creativity and passion for video games, with hands-on projects showcasing engine architecture, combat systems, and RPG mechanics.

INTERESTS

- Researching video game design and development trends.
- Filmmaking and script writing.
- Reading books, watching anime, and exploring narrative design.