SAM SHERROD

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EDUCATION

- **Oct 2020 – September 2023**   BSc. Computer Science - **University of London**, UK - **GPA (4.0)**

SKILLS

- **Technical**: C++ | Raylib | C# | Basic enemy AI | VR | Javascript | PhaserJS | Python | Java | HTML | CSS | NodeJS | Git | Bash | programming patterns | cloud game development | testing | optimizing code
- **Graphics**: GPU programming / HLSL | PBR | vertex and fragment shaders | materials | texture maps | lighting | VFX | animation | ray tracing | global illumination | linear algebra | vector mathematics
- **Software**: Unreal Engine 5 | Blueprints | Unity | GitHub | Visual Studio/Code | Windows | Mac OS
- **Soft**: Critical thinking, communication, problem solving, teamwork, strong work ethic, initiative

RELEVANT PROJECTS

3D Puzzle Demo – Personal Game made with Unreal Engine 5, C++, and Blueprints – [Project Link](#)

- Created a 3D puzzle demo game with multiple art assets snapped together with lights attached to meshes. Contained a first person controller with an attached camera system, basic post processing, ability to pick up and drop certain items, and a feature that allows walls to move up and down based on a condition. Made using Unreal Engine's Blueprints system, and C++ using OOP with multiple classes, references and pointers.

2D Action Platformer - Group Games Project in Unity for School – [Project Link](#)

- Produced a GDD and a schedule of deliverables. Used agile practices to work in a team of 4 from pre to post-production as the lead programmer. Implemented design patterns. Created persistent scripts, health and damage systems, UI and menus, animation state machine, camera controller, pickup systems, and Tilemaps.

Demo with Shaders – [Project Link](#)

- Created 10 custom shaders with Unity's Universal Render Pipeline, Shader Graph, and HLSL. Custom shaders and effects include a hologram, a 3D and 2D dissolve, force fields, cartoon water, a Fresnel glow, a shimmer effect, a gradient, and more. User can cycle between shaders by clicking on UI buttons. Various Shader properties are exposed for artists to adjust.

Virtual Reality Archery Project in Unity and C# – [Project Link](#)

- Created a 3D VR bow and arrow prototype within Unity allowing users to navigate and shoot at stars. Player can use the menu system virtually, and customize navigation controls by teleporting or moving with the joystick. Included a 3d terrain with textures, sounds, and particle effects. Built and deployed on Meta Quest 2. Used C# and Unity's XR Toolkit to create an XR Rig with working hand models.

C++ Audio Application Using OOP – [Project Link](#)

- Created a DJ audio application in C++ with the JUCE framework using OOP. Contained multiple classes with constructors that interacted with one another, references, pointers, and header files for each cpp file. Included two DJ decks, sliders, buttons, volume, and speed controls.

JavaScript Web Based Group Games Project – [Project Link](#)

- Created a web based 2D platformer game with pre-made assets using OOP and SOLID principles. Researched new technologies, and solely built 100% of the game portion in JavaScript, HTML, CSS, PhaserJS, and Tiled. Used agile software practices, and led a team of 5 from pre to post-production.

Front and Backend Web Application – Project Link

- Created a prototype of a dynamic web application allowing users to monitor and control devices in their smart home. Designed frontend, backend, and middleware with an API using HTML, CSS, JavaScript, NodeJS, Express, EJS templates, SQL, and MySQL. Used GET and POST HTTP methods to request and send data securely.

CERTIFCATES_____

- 25+ in software, Google IT Support, Unity Pathways, IBM AI Engineering, EA Software Engineering Virtual Experience Program

RELEVANT WORK EXPERIENCE_____

Business Owner – Director/CFO   **Kiowa Farm** – Victoria BC, Canada   2012 – Present

- Responsible for website development, coaching, program development, operations, administration, financial management, and human resources.