Liam Oliver Stewart

liam.oliver.stewart@gmail.com |portfolio | 07954 953377 | LinkedIn

2ⁿᵈ Year Game Programming Student at the University of Staffordshire

Technical Skills

- Languages: C++, Python, C#, HTML/CSS
- Libraries: OpenGL, GLFW, SDL, SFML, PyGame, JSON, ImGui, ImGuizmo
- Game Engines: Unity, Unreal Engine 5
- Tools: Git, Trello, Visual Studio

Projects

RTS Game Engine – Emperors Armory Studio (project page)   December 2023 – September 2024

- Using C++ built a prototype game engine for real time strategy projects designed for large sets of agents and interactions
- Built the agent manager, controlling all entities placed into the world using polymorphism to allow each agent to function uniquely
- Worked closely on the terrain system, creating tools to generate a JSON map file using python then loading that into the game engine using nlohmans JSON library and rendering terrain at the correct height accordingly
- Led a sub team of 3 programmers using discord to communicate progress and deadlines and to help any developers struggling on the team.

Luna Engine – Individual (project page)   May 2023 – Present

- Built a Unity-like engine in C++ as a long-term personal project, designed for extensibility and modern graphics features
- Implemented a CPU-optimized Entity Component System (ECS) for efficient data-oriented design
- Developed a custom OpenGL rendering pipeline supporting real-time lighting and shadows
- Integrated ImGui with full docking support and ImGuizmo to create a flexible in-engine editor interface
- Implemented file serialization to save and load existing scene files using nlohmans JSON library
- Integrated Lua scripting utilizing the sol2 library allowing developers to create custom experiences within my engine

Education

BSc (Hons) Computer Games Programming, University of Staffordshire – Achieved first class in Graphics Programming, Bespoke Platform Development and the Unity modules.

Employment

Kitchen Porter, Pi's Pizza, Poole   May 2024 – September 2024

- Teamwork, working closely with the chefs. I was responsible for cleaning dishes, wiping down sides and sweeping throughout the shift and shutting down once the kitchen was closed
- Adapted to changing demands in a fast-paced environment, such as handling unexpected busy periods, stepping in to support chefs, and adjusting to last-minute changes in cleaning or prep routines to maintain quality in the restaurant
- Followed all policies and procedures, especially the food and health safety

Interests – Enjoy playing pool with friends and family. I also love playing factory games due to the intense constant puzzle solving