John Iliadis

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Technical Skills

Languages: C++ (Advanced), Python (Intermediate)
APIs: Vulkan, OpenGL
Developer Tools: Git/GitHub, CMake, CLion, RenderDoc, Jira
Software Engineering: OOP, Data Structures & Algorithms, Concurrency
STEM: Linear Algebra, Calculus, Vector Calculus, Mechanics

Education

Swinburne University of Technology   Hawthorn, Victoria
Bachelor of Computer Science   *Aug. 2022 – July 2025*
GPA: 3.6/4.0

Melbourne Polytechnic   Preston, Victoria
Advanced Diploma of Engineering   *Feb. 2020 – Dec. 2021*

Projects

Vulkan Rendering Engine | *C++, Vulkan*
- Built a Vulkan physically based forward+ rendering engine, comprising over **14,000+ lines of code**.
- Implemented **advanced rendering techniques**, such as image based lighting, bloom, SSAO, shadow mapping, skybox, MSAA, and HDR.
- Boosted rendering performance by incorporating **optimizations techniques**, such as instanced rendering, compute-based light culling, async loading, and face culling.
- Developed a **custom editor** with a functional scene graph, infinite grid, transformation gizmos, world-space light icons, drag & drop, and popups.
- **Preview:** John-Iliadis/VulkanRenderingEngine

Projectile Motion Simulator | *C++, OpenGL*
- Developed a **physics-based simulator** for modeling motion in two dimensions.
- Implemented a 2D batch renderer to **optimize draw calls.**
- Implemented **custom text rendering** using FreeType for font rasterization.
- Created interactive vector, graph, and trajectory **visualizations** for analyzing the projectile's motion.
- **Preview:** John-Iliadis/ProjectileMotionSimulation

Pixel Adventure | *C++, SFML*
- A **fast paced 2D platformer** developed with SFML as the graphics library.
- Implemented **core systems**, including physics, animations, GUI, and asset handling.
- Parsed and managed world and configuration data with the nlohmann::json library.
- Used the Tiled editor for map design and creation.
- **Preview:** John-Iliadis/PixelAdventure

Work Experience

Warehouse Team Member   March 2022 – Aug. 2022
Archeiothiki SA   *Athens, Greece*
Managed daily warehouse operations including scanning, order picking with lifts, stocking shelves, and palletizing using electric equipment.

Trades Assistant   Feb. 2020 – Dec. 2021
Iliadis Renovations   *Melbourne, Australia*
Assisted with construction tasks including demolition, material handling, tool operation, and site clean-up.

Certifications

AWS Certified Cloud Practitioner   Dec. 2023