

# JOHN ILIADIS

C++ Programmer | Graphics Programmer

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## TECHNICAL SKILLS

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**Languages:** C/C++ (Advanced), Python, Java, C#  
**Graphics APIs:** Vulkan, OpenGL, DirectX 12, GLSL, HLSL  
**Developer Tools:** Git/GitHub, CMake, CLion, RenderDoc, Jira, VS 2022  
**Software Engineering:** OOP, Data Structures, Algorithms, Concurrency  
**STEM:** Linear Algebra, Calculus, Vector Calculus, Mechanics

## EDUCATION

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### Swinburne University of Technology

Bachelor of Computer Science  
GPA: 3.6/4.0

Hawthorn, Victoria

Aug. 2022 – July 2025

### Melbourne Polytechnic

Advanced Diploma of Engineering

Preston, Victoria

Feb. 2020 – Dec. 2021

## PROJECTS

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### Ypsilantis 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.

### Projectile Motion Simulator | C++, OpenGL, ImGui, FreeType

- 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.

### Next Home | React, Tailwind, Fast API, D3, Seaborn, Pandas, Scikit-learn

- Developed a real-estate app for **forecasting housing market dynamics**.
- Built a **D3.js dashboard** to present dynamic, interactive insights from AI model predictions.
- Processed over **2 million real estate records** with Pandas, boosting model accuracy and reducing bias.
- Used the Seaborn library to **analyze the dataset** and **visualize feature relationships**.
- Trained a price prediction model using various machine learning algorithms, achieving **80% accuracy**.

## WORK EXPERIENCE

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### Warehouse Team Member

Archeiothiki SA

Managed daily warehouse operations including scanning, order picking with lifts, stocking shelves, and palletizing using electric pallet trucks and stackers.

March 2022 – Aug. 2022

Athens, Greece

### Labourer

MyWay Bathrooms

Performed construction tasks such as cutting timber and plaster, mixing tile adhesive, performing demolition, handling building materials, and doing site clean-up.

Feb. 2020 – Dec. 2021

Melbourne, Australia

## CERTIFICATIONS

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**AWS Certified Cloud Practitioner**

Dec. 2023