

Hamish McDonald

☎ XXXX-XXX-XXX | ✉ hamish.pk.mcdonald@gmail.com | 🔑 hamishmcd123 | 🌐 hamishmcd.xyz

Aspiring game programmer with a strong foundation in mathematics, physics, and software engineering. Experienced in C++ development and game technologies such as Raylib, Unreal, and Godot. Passionate about algorithms, graphics programming, and systems design. Currently studying Game Programming at AIE Melbourne.

Education

Academy of Interactive Entertainment	Docklands, VIC
AdvDip(GameDev) in Game Programming	02/2025 - Present
Monash University	Clayton, VIC
BscAdvResearch(Hons) in Pure Mathematics and Physics	01/2023 - 12/2024

Experience

Tutor	North Shore Coaching College, Box Hill	01/2025 - Present
<ul style="list-style-type: none">Deliver engaging and structured lessons to primary and secondary students in a classroom setting, with a focus on academic enrichment and exam preparation.Support individual student progress through personalized feedback and targeted learning strategies.Collaborate with academic staff to align lesson plans with the college's curriculum standards and goals.Foster a positive and disciplined learning environment that encourages student participation and confidence.		
Tutor	Tutero, Remote	01/2024 - 01/2025
<ul style="list-style-type: none">Provided one-on-one online tutoring across a range of subjects to high school students, with a strong focus on building conceptual understanding and study skills.Customized lesson plans to suit individual student needs, learning styles, and academic goals.Utilized digital tools and interactive platforms to enhance engagement and track progress.Maintained consistent communication with students and parents to monitor growth and provide ongoing support.		

Projects

Punctual Plus Employee Management Software

- Tech Stack: React.js (Frontend) | C++20 (Backend) | SQLite | OpenSSL | JWT Authentication | git (version control)
- Engineered a C++ backend utilising SQLite integration, thus allowing for more efficient data storage and retrieval.
 - Ensured the project had secure authentication through the use of bcrypt, OpenSSL, HTTPS, and JWT.
 - Strengthened skills in network security, full-stack development, and GNU/Linux.

Awards and Honors

Deans List 2023 (WAM > 85), Monash University	2023
--	------

Skills

Programming Languages: 🐍 Python, 🟢 C++, 🟡 Lua, 🐉 GDScript, GLSL

Mathematics and Algorithms

- Analysis
- Linear Algebra
- Calculus (single variable, multivariable)
- Differential Equations
- Numerical Methods (Basic)
- Data Structures
- AI and Collision Algorithms (A*, GJK, etc)
- Design patterns (observer, singleton, factory, etc)

Tools and Frameworks: Git. Perforce. CMake. Raylib. CrowCPP. SOLite. ~~WTF~~ X. OpenGL. Unreal. Godot. Roblox Studio