

# Lau Meng Hong

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Computer Science graduate with 8 years of game development experience. Technical Lead of two games built in custom C++ engines that were showcased in TableCon Quest 2024, Singapore's largest tabletop gaming convention. Proficient in graphics rendering using OpenGL and game development in Unity. Adaptable and proactive; skilled in managing timelines, delivering on schedule, and leveraging new tools and technologies.

## WORK EXPERIENCE

### DigiPen | Singapore

Sep 2024 – Apr 2025

*R&D Software Engineer Intern*

- Built CI/CD pipelines by leveraging Jenkins and Docker to streamline automated testing and deployment workflows.
- Engineered API integration solutions between Unity frontend and backend services, ensuring seamless data exchange and system interoperability.
- Automated test result processing using XSLT and Python, improving data readability.
- Established scalable testing infrastructure using local MongoDB databases and AWS S3 storage solutions.
- Created comprehensive Unity test suites to validate system functionality and ensure integration reliability.

## PROJECT EXPERIENCE

### Unity Games

*Gameplay Programmer*

- Programmed and delivered 4 complete game projects utilising Unity engine and C# scripting for gameplay system implementation.
- Developed interactive mechanics and user experience features, demonstrating strong technical problem-solving and software development capabilities.
- Secured showcase opportunity at GameStart 2017 for *Arcade Alyse*, achieving recognition at Southeast Asia's leading gaming industry convention.

### Jam-boree!

*Technical Lead*

- Led a team of 5 programmers in developing a custom C++ game engine, powering Jamboree!
- Developed a shader-based rendering pipeline with OpenGL and GLSL, enabling high-performance graphics rendering.
- Implemented a 2D sprite sheet animation system for efficient rendering and asset reuse.
- Built an Entity Component System (ECS) in C++ to support flexible game object behaviour.
- Achieved recognition with game selection for presentation at TableCon Quest 2024 and competitive participation at Taipei Games Show, APAC's leading industry exhibition.

### G-Wang

*Technical Lead*

- Led a team of 8 programmers in developing a custom C++ game engine, used to build G-Wang.
- Designed scalable engine architecture using object-oriented principles for scripting and gameplay logic.
- Built a skeletal animation system and text rendering pipeline using OpenGL, enabling character animations and UI support.
- Integrated Mono runtime for C# scripting, allowing flexible runtime behaviour and developer extensibility.
- Developed custom asset compilers for texture formats (PNG, JPG) to DDS, and for FBX 3D models, streamlining asset conversion and loading.
- Selected for showcase presentation at TableCon Quest 2024 in Singapore.

## EDUCATION

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### **DigiPen Institute of Technology Singapore**

**Sep 2021 – May 2025**

#### **Bachelor of Science in Computer Science (Honours), Real-Time Interactive Simulation**

- Developed expertise in graphics rendering techniques and OpenGL implementation for real-time applications.
- Gained practical experience designing and building custom game engine architectures with integrated core systems using advanced programming techniques.

### **Singapore Polytechnic**

**Apr 2016 – May 2019**

#### **Diploma in Games Design and Development**

##### *Specialisation in Game Programming*

- Analysed gameplay mechanics and player experience frameworks to understand comprehensive game design theory.
- Developed multiple interactive game projects utilising Unity Game Engine, demonstrating proficiency in gameplay programming and system integration.

## SKILLS

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### **Programming Languages**

- C, C++, C#, Python, Java, JavaScript

### **Development Tools**

- Git, Docker, Jenkins, MongoDB

### **Frameworks and Technologies**

- OpenGL, GLSL, Unity

### **Software Engineering**

- Object-oriented programming, database management, API integration