

Johny Yong Jun Siang

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SUMMARY

Game programmer with over 5 years of academic and project experience in C, C++, and C#, developing with Unity and custom engines across PC, VR, console, and mobile. Experienced in building engine-level tools such as custom level editors to streamline development, and especially well-versed in designing Game AI systems, including A* pathfinding and behavior-based decision-making. Professional, responsive, and adaptable, with strong teamwork and communication skills to deliver results with efficiency and precision.

SKILLS

Programming Languages: C | C++ | C#

Scripting Languages: HTML, Lua

Spoken Languages: English (fluent, written and spoken) | Mandarin (fluent, written and spoken)

Software & Tools: Visual Studio 2022 | Visual Studio Code | Photoshop | GitHub | JSON | Firebase | Android Studio | Flutter

Game Engines: Unity | Unreal Engine

Platforms: PC | Mobile | Virtual Reality (Oculus Rift, Hololens) | PlayStation 4

EXPERIENCE

Mentor, Singapore Institute of Technology Community Challenge

Singapore Institute of Technology - Part Time

~October 2025 - October 2025

- Mentored teams in using **VittaScience AI** posture & image recognition tools for prototype development.
- Supported programming workflows, feature planning, UI/UX design decisions, and technical troubleshooting.

Auto Technician

Singapore Armed Forces - National Service

~May 2021 - August 2023

- Maintained and repaired military vehicle systems, ensuring operational readiness and reliability
- Collaborated within a technical team under strict deadlines and safety protocols.
- Developed a storage management mobile app during National Service using Azure DevOps & Flutter for development and Firebase for real-time tracking of resource usage.

Software Engineer

YJP Surveyors Pte Ltd - Internship

~June 2020 - August 2020

- Contributed to a HoloLens mixed reality project built in Unity, enhancing visualisation of underground pipes and connections normally hidden by walls or flooring.
- Implemented **voice recognition** features to improve user interaction and accessibility.
- Gained hands-on experience with point cloud data and **LiDar technology** to support spatial mapping and alignment.
- Delivered a fully functional prototype that was commended for its effectiveness and innovation.

EDUCATION

B.Sc.(Hons), Interactive Media & Game Development

Singapore Institute of Technology / DigiPen Institute of Technology

~August 2023 - April 2027

GPA: 3.56

Diploma in Game Development and Technology

Nanyang Polytechnic

~April 2018 - April 2021

GPA: 3.11

ACHIEVEMENTS

Edusave Good Progress Award

Nanyang Polytechnic

Commanding Officer's Coin

Singapore Armed Forces

NOTABLE PROJECTS

A* Pathfinding Optimisation Assignment

- Within a provided custom engine, implemented an A* pathfinding system with multiple heuristics, including Octile, Manhattan, Chebyshev and Euclidean.
- Focused on balancing accuracy vs computation cost, applying advanced heuristics to improve pathfinding speed while maintaining correctness.
- Achieved **Top 4** ranking in optimisation speeds among the cohort with this project, earning an invitation to tour the Nintendo of America Headquarters in Redmond.

Humanistic AI Research Project

- Within Unity, implemented enemy sensing systems such as vision cones, Gaussian raycasting, and Poisson disc sampling to simulate player visibility.
- Added sound-based detection with dynamic sound propagation and occlusion, allowing enemies to react to footsteps/gunfire.
- Built systems to track last known player positions, health pack locations, and suspicious events, enabling more responsive and adaptive enemy behaviors.
- Worked with the team to integrate sensing into a shared data system, so enemies could coordinate and act more naturally.

HoloBIM (Internship Project)

- Enhanced a HoloLens Mixed Reality application in Unity to visualise underground pipes and building connections.
- Implemented voice recognition and MRTK interactions (scaling, positioning, rotation) for hands-free and intuitive use.
- Added smooth model transitions and Vuforia-based world alignment to improve accuracy and clarity.
- Developed video recording tools for the HoloLens and applied High-Definition Render Pipeline (HDRP) effects for realistic scene presentation and project documentation.

CERTIFICATIONS

Playstation Game Development Training Completion

- Successfully completed industry recognised training in Playstation workflows by utilising the Playstation DevKit.

AI For Industry: Literacy in AI

- Gained foundational knowledge of artificial intelligence concepts and their industry applications.

HOBBIES & INTERESTS

- Playing Japanese Role-Playing Games (JRPGs) and analyzing their design approaches for inspiration in my own projects.
- Exploring automation with AI to apply emerging technologies into creative workflows.
- Reading novels and self-improvement books for continuous learning.
- Traveling overseas to explore cultures and broaden perspectives.