Alan Li

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Skills

Languages C++, C#, Python
Engines Unity, Unreal Engine
Specializations AI Programming, Network Programming, Performance Optimization, Tool Development, UI/UX Programming
Architecture System Design, Software Architecture, Design Patterns, OOP
Core Concepts 3D Math, Algorithms & Data Structures, Cross-Platform Development
Methodologies Agile, CI/CD, Unit Testing
Tools Git, Plastic SCM, Jira, Trello

Experience

Game Programmer **Apr 2025 – Present**
Attigas Studio (Full-time) *Toronto, ON, Canada*

- Architected and implemented core systems for a 3D ARPG, including combat, progression, inventory, and quests.
- Deployed a global Event Bus, improving system decoupling and increasing code maintainability by 30%.
- Customized the 3rd party Package to resolve complex physics issues, achieving precise character movement.
- Created custom Unity editor/debugging Plug-ins, automating debugging tasks and boosting team development efficiency.

Game Programmer **Sep 2024 – May 2025**
Moon Stray Studio (Contract) *Toronto, ON, Canada*

- Led development of a combat system blending turn-based strategy with card-driven mechanics.
- Devised a high-performance feedback pipeline using asynchronous loading, ensuring a stable 60 FPS on low-end devices.
- Built a highly extensible skill system, reducing new character/card design cycles by over 70%.
- Created custom tools that cut content setup time from 30 mins to 2 mins, reducing human error.

Research Assistant **Oct 2023 – Jan 2024**
Sheridan College (Part-time) *Oakville, ON, Canada*

- Led the development of a real-time 3D Human Pose Estimation system for markerless motion capture.
- Constructed a hybrid Unity (C#) and Python architecture for high-fidelity rendering and deep learning model processing.
- Refined pose estimation models, achieving efficient, low-latency, cross-platform inference.
- Implemented a low-latency (<20ms) TCP/IP protocol for seamless data exchange between Unity and Python.
- Engineered a 3D skeletal visualization system in Unity for precise, real-time human pose tracking with 98% accuracy.

UI Programmer **May 2022 – Jan 2023**
NetEase (Internship) *Hangzhou, China*

- Contributed in UI implementation and optimization across multiple game projects using Unreal 4/5 (C++ & Blueprints).
- Built responsive UI components, optimizing them to maintain 60 FPS and cross-platform compatibility.
- Assisted in debugging existing UI systems within a live production environment.
- Gained practical experience in Agile methodologies and professional development pipelines through team collaboration.

Education

Sheridan College **Jan 2024 – Apr 2025**
Graduate Certification, Machine Learning *Brampton, ON*
Sheridan College **Sep 2023 – Aug 2024**
Graduate Certification, Advanced Game Programming *Oakville, ON*
Beijing Film Academy **Sep 2019 – Jun 2024**
Bachelor's, Digital Media Technology *Beijing, China*

Projects

Dungeon CEO – Award-Winning Game Development **Apr 2024 – Aug 2024**

- Led development of core gameplay systems (Combat, Card), securing the CNE Best Student Game Award against a field of over 30 competitors.
- Designed a modular card and combat engine supporting 50+ cards, cutting content integration time by 40%.
- Engineered a custom Visual Event System to decouple VFX from logic, enhancing combat feedback and visual fidelity.

Lucid Dream **Apr 2024**

- Directed core gameplay and a scalable AI architecture, reducing team development cycles by 20%.

- Improved performance using Unity Profiler, resolving major crashes and increasing average session time by 25 minutes.
- Drove technical excellence through code reviews and support, resolving complex cross-platform and AI issues.

Game AI System **Feb 2024**

- Developed a modular AI system in Unity using Composite, Strategy, and Template Method design patterns.
- Enhanced AI to achieve $< 0.1ms$ execution time per agent, reducing computation overhead and memory usage by 40%.
- Deployed 12+ distinct AI behaviors with adaptive A* pathfinding and environmental awareness.

Space Shooter MP Engine **Dec 2023 – Jan 2024**

- Co-architected a C++ game engine from scratch with a client-server multiplayer model.
- Applied client-side prediction and server reconciliation, reducing perceived network latency by 60%.
- Utilized multi-threading and advanced C++ to build a cross-platform SDL framework, enabling future mobile extension.

VOLUNTEER EXPERIENCE

XP Game Summit **June 2025**
Event Receptionist *Toronto, ON*

- Assisted 500+ attendees at a major game industry event, ensuring a positive and organized reception experience.
- Managed registration and badge distribution, efficiently resolving inquiries and providing event information.