ALI KASSAB

Unity Game Developer

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SUMMARY

Gameplay and Systems Engineer with experience shipping cross-platform titles on PS5, PS4, PC, Android, and iOS. Specialized in scalable gameplay architecture, multiplayer systems, AI behavior design, and performance optimization for production-ready indie, AA, and AAA projects. Strong focus on clean architecture, modular systems, and long-term maintainability.

EDUCATION

Dual Degree Program Oct 2020 - May 2024

Ain Shams University
Bachelor of Computer and Information Sciences

University of East London
Bachelor of Science, Software Engineering Program

SKILLS

Core Technologies:
Unity, C#, C++, SFML
Photon PUN, Photon Fusion
Console, PC & Mobile Deployment

Systems & Architecture:
OOP, Design Patterns
System Architecture
Modular Design
Multithreading
Async Programming

Gameplay & Optimization:
Behavior Trees, FSM
Pathfinding (A*, BFS, DFS), NavMesh
Multiplayer & Networking
Performance Optimization

PROFESSIONAL EXPERIENCE

Game Programmer Mega Cat Studios, Inc. November 2024 – Present
Pittsburgh, Pennsylvania, USA

- Architected core systems for the ***Pit of Agonies*** mode in ***God of War Sons of Sparta*** including reward seeding, items, shop UI, and progression, reworking legacy systems to support the mode.
- Developed modular NPC/Enemy behavior systems using Behavior Trees and FSMs, supporting 10+ archetypes across combat, patrol, and interaction for ***God of War Sons of Sparta***.
- Implemented core gameplay feel systems (physics, camera, input, world-space UI) and a state-driven animation sequencing system for gameplay and cinematics.
- Contributed to C++ porting pipelines for Android, supporting 5 shipped ***Backyard Sports*** titles with performance and feature parity.
- Refactored and maintained internal engine libraries (multithreading, async, physics, networking), improving stability and long-term maintainability.
- Built a data-driven gameplay balancing system using YAML configs, enabling designer-driven tuning without code changes.
- Enforced visual/gameplay decoupling, improving reusability and reducing system coupling.

Unity Game Developer Genesis Creations S.A.E August 2023 – July 2024
Cairo, Egypt

- Designed core game systems (error handling, notifier systems, UI, user access, command prompting) for the published mobile title *Sinai Heroes*.
- Built VR hand pose tracking and object interaction features, increasing player immersion by 40%.
- Integrated networking, multiplayer, and matchmaking with Photon PUN, reducing connection issues by 70%.
- Optimized environments and meshes, reducing draw calls by 75%.

PROFESSIONAL EXPERIENCE

Dungeon Of The Skeletons (SFML, C++) May 2021
2D Platformer | Developer | Team of 6

- Implemented UI and input systems.
- Built player character animation and movement systems.
- Architected collision systems to handle jump states and prevent overlapping.
- Designed collectibles and progression via quest items.
- Programmed hazards and enemies with patrol and turret behaviors.
- Managed scene/state transitions for menus, controls, and cutscenes.

Mystic Sands (Unity, C#) September 2024
ITI-BelMasry Tech Hackathon | 1st Place
Narrative-Driven Adventure | Lead Programmer | Team of 4

- Expanded maze regeneration using Recursive Backtracking, improving efficiency by 40%.
- Integrated graph-based dialogue and quest systems, boosting engagement by 50%.
- Created realistic NPC AI with NavMesh pathfinding, increasing responsiveness by 50%.
- Structured modular UI with Command Design Pattern, reducing update time by 20%.

FakeOut BOSS (Unity,C#) February 2025
GDA JAM | 1st Place
Stealth, Simulation, and Comedy | Lead Programmer | Team of 3

- Engineered an NPC awareness system, where AI-controlled coworkers detect suspicious behavior based on activity, movement, and reaction time, increasing challenge adaptation by 35%.
- Integrated an adaptive time dilation mechanic, allowing players to slow time for precise decision-making during high-risk moments, improving last-second reaction success by 50%.
- Constructed an unpredictable NPC patrol, customizable pathfinding system (BFS, DFS, A* and its variants) and gaze system, preventing static behavior by introducing randomized state transitions, fake-outs, and varying alert levels, increasing replayability.
- Optimized task-balancing mechanics, forcing players to manage both in-game progress and workplace deception, leading to an increase in player engagement and multitasking efficiency.

Senseless (Unity, C#) August 2025
Multiplayer Extraction Co-op horror | Lead Programmer | Team of 3

- Implemented multiplayer functionality using Photon Fusion.
- Designed area-based progression requiring key cards to unlock zones.
- Developed monster AI FSM with A* pathfinding, supporting diverse behaviors.