

# 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

<b>Core Technologies:</b> Unity, C#, C++, SFML Photon PUN, Photon Fusion Console, PC & Mobile Deployment	<b>Systems &amp; Architecture:</b> OOP, Design Patterns System Architecture Modular Design Multithreading Async Programming	<b>Gameplay &amp; Optimization:</b> Behavior Trees, FSM Pathfinding (A*, BFS, DFS), NavMesh Multiplayer & Networking Performance Optimization
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### PROFESSIONAL EXPERIENCE

<b>Game Programmer</b> <a href="#">Mega Cat Studios, Inc.</a> Pittsburgh, Pennsylvania, USA	November 2024 – Present
<ul style="list-style-type: none"><li>Architected core systems for the <b>Pit of Agonies</b> mode in <a href="#">God of War Sons of Sparta</a> including reward seeding, items, shop UI, and progression, reworking legacy systems to support the mode.</li><li>Developed modular NPC/Enemy behavior systems using Behavior Trees and FSMs, supporting 10+ archetypes across combat, patrol, and interaction for <a href="#">God of War Sons of Sparta</a>.</li><li>Implemented core gameplay feel systems (physics, camera, input, world-space UI) and a state-driven animation sequencing system for gameplay and cinematics.</li><li>Contributed to C++ porting pipelines for Android, supporting 5 shipped <a href="#">Backyard Sports</a> titles with performance and feature parity.</li><li>Refactored and maintained internal engine libraries (multithreading, async, physics, networking), improving stability and long-term maintainability.</li><li>Built a data-driven gameplay balancing system using YAML configs, enabling designer-driven tuning without code changes.</li><li>Enforced visual/gameplay decoupling, improving reusability and reducing system coupling.</li></ul>	

<b>Unity Game Developer</b> <a href="#">Genesis Creations S.A.E</a> Cairo, Egypt	August 2023 – July 2024
<ul style="list-style-type: none"><li>Designed core game systems (error handling, notifier systems, UI, user access, command prompting) for the published mobile title <a href="#">Sinai Heroes</a>.</li><li>Built VR hand pose tracking and object interaction features, increasing player immersion by 40%.</li><li>Integrated networking, multiplayer, and matchmaking with Photon PUN, reducing connection issues by 70%.</li><li>Optimized environments and meshes, reducing draw calls by 75%.</li></ul>	

## PROFESSIONAL EXPERIENCE

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### 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 | Team Lead | 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 | Team Lead | 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 | Team Lead | 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.