KARABELO MOFOKENG

South Africa, Johannesburg, Sandton 2090| (+27) 61 420 0139|
SMG.V1.0.0@GMAIL.COM

OBJECTIVE

Innovative and self-driven **Unity Gameplay Programmer** with over 6 years of experience developing immersive game mechanics and systems. Proficient in **C#** and the **Unity Engine**, with specialization in **multiplayer networking**, **AI behaviour**, and **performance optimization**. Demonstrated ability to contribute meaningfully to gameplay architecture, taking projects from concept to polished execution. Experienced in collaborating across disciplines, with a deep appreciation for clean, scalable code and well-balanced player experiences.

Highly adaptable and persistent, with a natural inclination toward problem-solving — often spending entire days laser-focused on a single technical challenge until it’s resolved. A quick learner with strong critical thinking and communication skills, Comfortable in agile environments and driven to continuously learn and improve. Committed to constant growth and contributing to impactful, innovative games.

- **Game Engines:** Unity 3D/2D (C# scripting, Prefabs, Animation systems)
- **Gameplay Systems:** Combat mechanics, inventory & health systems, character controllers, animation integration
- **Multiplayer Networking:** Client-server architecture, state synchronization, matchmaking, lag compensation
- **AI & Behaviour:** NavMesh, finite state machines, behaviour trees, group/horde AI
- **Procedural Generation:** Terrain/world generation, Perlin/Simplex noise, dynamic level design
- **Optimization & Debugging:** Performance profiling, memory management, multithreading, frame rate optimization
- **Tools & Workflow:** Git version control, Unity Profiler, Visual Studio, Agile/Scrum methodology, JIRA

EXPERIENCE

Dates From-To

Unity Game Developer (Freelance) *2018 – Present*

- Developed and optimized core gameplay features for multiple Unity projects using C#, including player controls and game rules.
- Engineered combat systems and dynamic AI behaviours to create engaging and responsive gameplay mechanics.
- Designed and implemented networked multiplayer solutions, handling real-time player synchronization and authoritative server logic.
- Integrated 2D sprite characters within 3D environments, ensuring seamless animation blending and visual consistency.
- Applied performance profiling and optimization techniques to maintain smooth gameplay on target hardware.
- Collaborated with artists and designers in an iterative Agile development process, using Git for version control and ensuring timely feature delivery.

ALONE(SERIES)

(MADE IN UNITY ENGINE)

Pre-Nexus Trials *(Competitive FPS Demo)*

- Developing a competitive first-person shooter serving as a prologue to the main ALONE series ("BEWARE THE HORDE" being the official first episode of the series).
- Integrated dynamic 2D sprite characters within a 3D environment, advancing traditional billboard techniques.
- Implemented advanced inventory and health systems to support intense combat scenarios.
- Engineered real-time network synchronization for player movements and interactions, facilitating stable multiplayer matches on a dedicated server.
- Optimized performance and asset loading to handle high-action gameplay efficiently.

Beware the Horde *(Survival Horror Game)*

- Developing a first-person survival horror game featuring procedural world generation and dynamic AI horde behaviour.
- Created algorithms for varied environments and obstacles, enhancing replayability.
- Developed adaptive AI horde tactics to increase challenge and realism.
- Implemented networked features, including cooperative play and synchronized enemy states.
- Focused on performance optimization through asynchronous loading and efficient asset management.