

# Rayan Samaha

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## Career Objective

Passionate Software Engineer with six years of professional experience seeking employment in the game development industry where I can utilize my acquired experience and knowledge of software development practices and improve my skillset. I am enthusiastic about programming and love to engage in new endeavors.

## Work Experience

### **Game Programmer (Engine / Gameplay / UI / Networking / Backend)**

*Kongor Studios - Game: Heroes of Newerth: Reborn*

Jun 2024 – Feb 2026 Remote (**Full Time**)

*All of the following was shipped on a live service MOBA with 4,000+ concurrent players*

#### **Engine & Systems Architecture**

- **Delivered a 10% improvement in live game server performance** by leading a major refactor of a core gameplay system, eliminating latency bottlenecks and stabilizing overall system performance.
- **Collaborated cross-functionally with designers and backend engineers to build end-to-end infrastructure for secure in-game microtransactions**, delivering real-time currency and digital products inventory sync across client and server, supporting full in-match purchasing, equipping, and activation flows.
- **Extended the engine's existing text rendering system with a fully integrated emoji rendering pipeline**, incorporating high-performance tokenization text processing, and alias-based emoji lookup to support emoji display natively across all in-game text.
- **Extended the engine's input system to support Lua-driven key bindings**, enabling scripted callback behaviour directly from Lua.
- **Architected and implemented a comprehensive cosmetic customization system**, by extending the custom scripting language to support modular asset scripting and simplified designer workflows.

#### **Graphics, UI, & Audio**

- **Enhanced the visual engine** by introducing advanced color correction tools providing users with accessible post-processing control.
- **Improved the voice chat audio experience** by refactoring the underlying FMOD audio system to automatically prioritize voice chat over other audio channels during active communication.
- **Collaborated with UI programmers and designers to develop and ship a range of dynamic in-game UI systems**, enhancing player experience across multiple areas of live gameplay.

#### **Networking**

- **Enabled transmission of large data payloads over the existing network layer** by implementing server-side compression and client-side decompression, reducing bandwidth overhead and unlocking new data-heavy features.
- **Implemented a wide variety of network packets** across multiple game systems, covering the full lifecycle of each packet from definition and serialization through to server-side handling, client-side processing, and debugging.

#### **Technology used:**

- C++ (11/14/17/20), Lua, C#, XML
- Docker, .NET, gRPC, protobuf, FMOD, HLSL, tracy, SQL
- Git, GitLab

## Game Programmer - Mid Level (Game / UI / Backend)

*Kreationware - Games: Desert Revenant, Desert Revenant 2: The Reawakening*

Jul 2022 – Dec 2025 Remote (**Full Time**)

- **Optimized CPU and GPU performance** by leveraging Unreal Engine 4's internal profiling suites, significantly reducing resource overhead and enhancing frame-rate stability.
- **Designed an automated text localization and internationalization pipeline**, streamlining string extraction and word-count optimization to facilitate global multi-language deployment.
- **Implemented a deterministic procedural generation pipeline** driven by a single seed value, ensuring reproducible world state, entity placement, and gameplay conditions across sessions.
- **Developed a comprehensive user progression and automated challenge system via Microsoft PlayFab**, incorporating persistent stat tracking and secure reward fulfillment for weekly rotating events.
- **Implemented a server-driven weekly challenge system** that distributes a deterministic seed and predefined challenge parameters, ensuring identical gameplay conditions for all players during the weekly cycle.
- **Architected and implemented a strategic turn-based event mode**, designing custom state machines and gameplay logic integrated seamlessly into the main game mode.
- **Implemented a robust real-time analytics pipeline via Microsoft PlayFab**, enabling the tracking of complex session-based player events and telemetry for data-driven design analysis.
- **Engineered and refactored core gameplay systems** to meet design specifications, ensuring high-performance execution, modularity, and architectural scalability.

## Game Programmer - Junior Level (Game / UI / Backend)

*Kreationware - Games: Desert Revenant, Desert Revenant 2: The Reawakening*

Jun 2020 – Jul 2022 Hybrid - Lebanon, Dbayeh (**Full Time**)

- **Led the end-to-end implementation of a new codebase** from initial conceptualization through full deployment; managed the technical roadmap by coordinating team task distribution and cross-functional engineering meetings.
- **Engineered a scalable UI architecture** optimized for widget reuse and multi-resolution compatibility, incorporating robust text-processing frameworks to support internationalization and multi-language localization.

### Technology used:

- Unreal Engine 4, C++, Blueprints visual scripting, UMG, JavaScript
- KQL, cron
- Microsoft PlayFab, Steamworks, Perforce, p4v, Azure
- Jira, Confluence, Trello, ClickUp

## Education

### BS in Computer Science with an emphasis in Game Development

*American University of Science and Technology*

Oct 2017 – Feb 2022 Achrafieh, Lebanon

- Graduated with Honors
- GPA: 3.41/4.0

## Languages

- English (Proficient)
- Arabic (Native)
- French (Professional Working Efficiency)