

M. Ahsan Ijaz

Senior Gameplay Programmer - Unity Developer - 10 Years Experience

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PROFESSIONAL SUMMARY

Senior Gameplay Programmer with 10 years of experience building the systems that live multiplayer games run on. Designed a **3-layer AI architecture** powering 1,000+ daily active players on a live game. Architected and shipped a 5-platform VR events platform serving 200 concurrent users per session for **PwC, the United Nations, and NTT Data**. Specialized in **Photon Quantum** deterministic networking, AI/NPC systems, and game economy design. Led teams of up to 8 developers and shipped two solo mobile titles end-to-end on Android and iOS.

WORK EXPERIENCE

Senior Gameplay Programmer | KAP Games | Remote | February 2024 - Present

Project: Captain & Company (capnco.gg)

- Took a single-ship prototype to a live, faction-based arena game now serving **1,000+ daily active players** on the Abstract blockchain. Led a team of 4 developers from prototype through live production.
- Designed a **3-layer AI architecture** (strategic, tactical, execution) for ship pilots, crew, and bosses, including the Kraken, Golem, and Octopus. Increased average session length from **5 to 20 minutes**.
- Built the Talent Tree, Perk system, game modes, and cannon variants (Scattergun, Mortar). Shipped a real-time auction house with on-chain transaction history via Sequence SDK.
- Implemented multiplayer using **Photon Quantum** deterministic networking, ensuring frame-perfect sync and built-in cheat resistance across all player ships and AI units.

Lead Unity Developer | Salvay | Hybrid, Lahore | July 2023 - September 2024

Project: MoonKarts | moonkarts.arcadecolony.com

- Shipped MoonKarts from concept to live release in **10 months** as the **first Unity title on Arcade Colony**. Across architecture, multiplayer, and economy systems by leading a team of 4 devs, resulting in on-time delivery.
- Built the kart controller in **Photon Quantum** with custom anti-gravity physics for loop tracks and 5 powerup systems (boost, shield, homing rocket, trap, lasershot). Deterministic networking ensured frame-perfect sync and prevented client-side cheating.
- Designed and implemented the full replay system (JSON serialization, custom backend), leaderboard service, and in-game card and fuel economy with on-chain transaction support.
- Also developed **Gnomewars**, a first-person shooter using Mirror Networking with custom gun mechanics and Docker-based private server deployment.

Lead Unity Developer | Arthur | Remote | February 2021 - June 2023

Arthur Virtual Office | arthur.digital

- building an enterprise VR collaboration platform for **PwC, the United Nations, NTT Data, and Société Générale**. Drove **2.5x year-over-year user growth** and 1.6 million session minutes annually. Platform earned the **G2 Leader award** in VR Collaboration. Led a team of 7 as mentoring juniors and maintaining quality.
- Delivered server-client optimizations that improved spatial audio fidelity and cut network update overhead in large meetings, directly enabling the user growth above.
- Built the **Pinboard feature** (sticky notes, shapes, document sharing), adopted as a flagship feature across the enterprise client base.
- Integrated a **live Jira board** using raw Jira APIs, letting users create, edit, comment, and delete tickets directly inside the virtual office, which got the product mentioned in multiple blogs, like globalnewswire.com's blog.
- Implemented photorealistic avatar generation with **AvatarSDK**, including configurable apparel and accessories.

Lead Unity Developer | NOBORDERz | Lahore, Pakistan | March 2020 - February 2021

XANA Virtual Events Platform | xana.net

- Architected and built XANA from scratch, leading a team of 8 to ship a virtual events platform supporting **200 concurrent users per session** via **Amazon Gamelift**. Deployed simultaneously to **Quest, Android, iOS, macOS, and Windows** from a single Unity codebase.
- Hosted the **Tokyo Olympics 2020 Exhibition, Milan Fashion Week 2021**, and a Street Fighter V Esports Tournament with zero downtime under live event conditions.
- Designed the full server-client architecture, organizer and visitor permissions system, and integrated live YouTube streaming directly into the platform.

Earlier roles (2015-2020): Senior Unity Developer at Five Rivers Technologies (ML-Agents, RL), Co-Founder at Zamunga Games, Game Developer at ForLoop Technologies, Unity Intern at Fate Softworks.

PROJECTS

Pet Idle Tycoon | Android & iOS | Solo Developer

Designed and shipped a 2D idle tycoon game in Unity with **25 animal production units** and a layered economy combining exponential, logarithmic, and geometric formulas for long-term retention. Implemented offline earnings, currency notation, prestige mechanics, ads, and in-app purchases. **10,000+ downloads on Google Play with a 5.0 rating across 112 reviews.** [Play Store: <https://play.google.com/store/apps/details?id=com.benngames.idlepetfactorytycoon>]

History Clash | 3D RPG/RTS Hybrid | In Development

Designing and building a 3D RPG/RTS hybrid with resource mining, base construction, and one-on-one card-based multiplayer battles. Multiplayer built with **Photon PUN 2** on a custom ECS architecture delivering **20 fixed-frame, zero-lag networking**. Currently testing with real users and iterating on the core gameplay loop based on structured feedback. [Demo: youtube.com/watch?v=87CtyebW7wI]

API Query Master | Unity Asset Store | Published

Published a Unity Asset Store package for queue-based API processing with retry handling, exception management, and success/error callbacks. Used by Unity developers building production apps with reliable third-party API integration. [Asset Store: assetstore.unity.com/packages/tools/utilities/apiquerymaster-291614]

SKILLS AND TECHNOLOGIES

- **Game Engines & Languages:** Unity3D, C#, Unreal Engine, C++
- **Multiplayer Networking:** Photon Quantum, Photon Fusion, Photon PUN, Mirror Networking, Amazon GameLift, Netcode, deterministic networking, server-client architecture, client prediction, lag compensation
- **AI & Game Systems:** AI/NPC architecture, behavior trees, Unity ML-Agents, reinforcement learning, game economy design, ECS / Unity DOTs, scriptable objects, custom editor tools
- **Engine & Performance:** GPU and memory profiling, draw call optimization, texture compression, AssetBundle management, object pooling, LOD systems, shader scripting, build size optimization
- **Live Service & Production:** Live ops, A/B testing readiness, agile and scrum delivery, code review, mentoring, sprint planning, performance monitoring
- **Platforms:** VR/AR/MR (Meta Quest, Pico, HoloLens), Android, iOS, macOS, Windows, Steam
- **Blockchain & Web3 Integration:** Sequence SDK, Solidity, Solana, NFT minting and trading, on-chain transaction systems, Web3 API integration
- **Tools & Collaboration:** Git, Plastic SCM, Jira, ClickUp, Notion, Slack, Discord, Docker
- **Backend & Adjacent:** Python, Node.js, PHP/MySQL, REST API design

EDUCATION & LANGUAGE

- **BS Computer Science | 2012 - 2016** University of Engineering and Technology, Lahore GPA: 3.51 / 4.00
- **English - C1 Proficient** (IELTS 7.5)