

# MUHAMMAD HASNAIN

Unity Game Developer | Gameplay Systems Engineer

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## PROFESSIONAL SUMMARY

Unity Game Developer with 2+ years of hands-on experience independently designing, building, and shipping 30+ interactive 2D games for two live educational platforms (EFG Games and NeuroNovels). Skilled in gameplay systems architecture, modular C# design, WebGL performance optimization, and multi-cloud deployment (Vercel, Cloudflare, AWS). Comfortable owning a project end-to-end — from a single client idea through full design, build, and production deployment — with minimal oversight.

## PROFESSIONAL EXPERIENCE

### Unity Game Developer — Remote Sep 2023 – Present

*Knoduct Coaching Learning LLC (EFG Games / NeuroNovels), Minnesota, USA · project-based; regular ongoing engagement since Dec 2024*

- Independently designed, built, and shipped 30+ 2D educational games end-to-end — from initial concept through gameplay systems, UI/UX, audio, and final production deployment — for EFG Games (efggames.com) and, since early 2026, NeuroNovels (neuronovels.com).
- Designed reusable gameplay architectures using ScriptableObjects and modular C# systems, cutting rebuild time on similar game types.
- Implemented core systems including level progression, scoring, timers, save/load pipelines, and analytics integration to track user behavior.
- Built and maintained a multi-platform deployment pipeline: WebGL builds hosted via Vercel, Cloudflare Pages + R2 (for builds over 100MB), and AWS CloudFront/S3 with IAM policies and Amazon Polly for text-to-speech.

## SELECTED PROJECTS

### ML-Based 3D Defect Visualization (Unity 3D) — Client NDA

- Integrated machine learning model outputs into Unity for real-time building defect visualization.
- Built a dynamic marker-placement system across multiple building wall surfaces driven by external detection data.
- Designed a data-driven visualization pipeline connecting ML inference results to a 3D inspection interface.

### 50-Level Block Breaker — EFG Games | [Game Demo](#)

- Designed a scalable level-progression system with difficulty curves across 50 levels.
- Implemented real-time collision physics and scoring.
- Built game-state management for pause, restart, and scene transitions.

### Analog Clock Learning Game — “Clock It Right” — EFG Games | [Game Demo](#)

- Built an interactive analog clock system spanning four distinct time-learning modes.
- Implemented input validation and real-time feedback loops for answer checking.
- Designed a modular architecture reused across other learning-game modules.

### NeuroPhonics — NeuroNovels

- Built a five-stage phonics learning platform spanning letter recognition through advanced sentence construction, with parallel Learning and Practice modes.
- Implemented cloud-saved progress tracking so learners can resume across sessions and devices.
- Designed a voice-guided instructional flow synced with on-screen interaction and stage unlocks.

## TECHNICAL SKILLS

- Game Engine: Unity (2D & 3D), WebGL Build Optimization
- Gameplay Systems: Game State Management, Level Progression, Scoring & Timer Systems, Save/Load Pipelines, Physics-Based Mechanics
- Programming: C#, Object-Oriented Programming (OOP)
- Architecture & Design: ScriptableObjects, Modular System Design, Data-Driven Development
- Deployment & Cloud: Vercel, Cloudflare Pages & R2, AWS (S3, CloudFront, IAM), Amazon Polly (TTS)
- Tools & Version Control: Git, Unity Editor

## EDUCATION

### Bachelor of Science in Computer Science Sep 2022 – Jul 2026

Institute of Space Technology, Islamabad