GAME DEVELOPER PORTFOLIO

Ahmet Alp Akay

Unity Game Developer

Unity game developer focused on performance-critical systems and scalable gameplay architecture. Experienced in object pooling, procedural difficulty design, and real-time combat mechanics. Published a mobile game on Google Play and built performance-optimized 3D gameplay prototypes.

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GITHUB
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LOCATION
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ITCH.IO
pakay.itch.io

01 — ABOUT

Who I am

I'm a final-year Computer Engineering student at Kocaeli University, working with Unity on both mobile and desktop game development. I have taken a game through every stage from concept to store release, and along the way I have come to appreciate how critical both technical architecture decisions and user-focused design iterations are to a project's success.

What interests me most is closing the gap between "code that works" and "code that works well." I have gained practical experience in object pooling, GC optimization, and ScriptableObject-based modular systems. I actively use the Unity Profiler to identify and resolve performance bottlenecks.

Solo project experience has given me a broad perspective on both software architecture and product thinking. Now I want to build on this foundation in a professional team environment, learn from experienced developers, and contribute to hybrid-casual game development processes.

2 PUBLISHED / PLAYABLE PROJECTS	Solo DEVELOPMENT OWNERSHIP
2D + 3D UNITY EXPERIENCE	URP RENDER PIPELINE

Animal Merge

PLATFORM	ROLE	ENGINE
Android · Google Play	Solo Developer	Unity 2D (URP)

A physics-based merge puzzle game built with Unity and published on Google Play. Built around a mechanic where identical animals merge into higher-tier characters upon collision. The entire process from concept to Play Store release was handled solo.

KEY CONTRIBUTIONS

- Designed and implemented a physics-driven merge system on top of Unity 2D physics, where identical animals combine into higher-tier characters upon collision
- Integrated Google Play Games Services and Unity Localization for global release
- Managed the full mobile release pipeline including UI/UX iteration, mobile device optimization, and Play Store deployment

TECHNOLOGIES USED

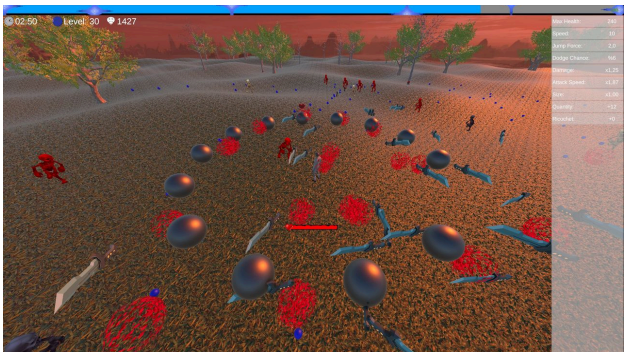
Unity URP · C# · Unity 2D Physics · Google Play Games Services · Unity Localization · Android Build Pipeline · Google Play Console

▸ View on Google Play

Mega Boom 2

PLATFORM	ROLE	GENRE
PC · Itch.io	Solo Developer	3D Rogue-like Bullet Heaven

A performance-focused 3D rogue-like bullet heaven built with Unity. Designed around scalable enemy waves and optimized real-time combat systems. Playable build available on Itch.io. Primary goal: an architecture capable of handling large-scale enemy crowds at a stable frame rate.



KEY CONTRIBUTIONS

- Designed an endless survival loop with dynamically scaling enemy waves and progression systems
- Built a performance-optimized object pooling architecture for enemies, projectiles, VFX, and collectible drops to minimize GC spikes and runtime allocations
- Modular weapon and upgrade systems based on ScriptableObjects, with probabilistic reward selection logic for replayability
- Optimized physics interactions and collision handling for real-time combat with large-scale enemy crowds

TECHNOLOGIES USED

Unity URP | C# | ScriptableObjects | Custom Object Pooling | Unity Profiler | 3D Physics

► Play on Itch.io

04 — SKILLS

Technical Profile

GAME DEVELOPMENT

Unity (2D & 3D)
Universal Render Pipeline (URP)
ScriptableObjects
Object Pooling
Procedural & Physics Systems

PROGRAMMING

C#
Object-Oriented Programming
Data Structures & Algorithms
Clean Architecture Principles

PERFORMANCE OPTIMIZATION

Memory & GC Optimization
Unity Profiler
Allocation Reduction
Runtime Performance Tuning

BACKEND & WEB

ASP.NET Core MVC
Entity Framework Core
REST API
SQL Server

TOOLS & WORKFLOW

Git & GitHub
Google Play Console
Android Build Pipeline
AI-Assisted Development (Claude, Copilot)

LANGUAGES

Turkish — Native
English — B2

05 — EXPERIENCE & EDUCATION

Background

Software Development Intern

July 2025 — August 2025

TrTek Medical Software · Remote

Developed a full-stack Event Management System using clean architecture principles. Implemented authentication, role management, and database integrity controls.

Computer Engineering

2022 — Present

Kocaeli University · Final Year

06 — CONTACT

Let's work together.

Open to new opportunities and collaborations.

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