Alperen Aydas

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SUMMARY

Senior Game Developer with 4+ years of professional experience shipping 4x strategy and competitive multiplayer titles. Expert in Unity (C#) gameplay programming with a strong focus on **client-server architecture** and performance optimization. Expanding expertise into **Native C++ Networking**, demonstrated by developing a custom authoritative network engine (Prediction, Reconciliation) to bridge the gap between high-level gameplay logic and low-level transport protocols.

SKILLS

Languages : C#, C++
Engines : Unity 3D, Unreal Engine 5, Custom C++ Engines
Networking : ENet (UDP), Client-Side Prediction, Server Reconciliation, Snapshot Interpolation, Lag Compensation
Core Systems : Data-Oriented Design (DOTS/ECS), Memory Optimization, Multithreading, Gameplay Architecture

EXPERIENCE

Panteon   Jan. 2023 – Present
Senior Game Developer   Ankara, Turkey
- *Core Gameplay Programmer for "Rise of Heroes" (4X Strategy) and "Arcane Arena" (PvP Tower Defense)*
- **Arcane Arena (Live Ops)**: Implemented real-time multiplayer PvP features, collaborating closely with backend engineers to ensure **accurate state synchronization** and cheat prevention.
- **Rise of Heroes**: Owned the development of major social features including the **Alliance System** and **Chat Architecture**, managing complex asynchronous data states.
- Architected the **Scene Subsystem** to manage massive dynamic map object counts, achieving a **40% increase in FPS** through data-oriented optimization.
- Played a key role in the **technical pivot** to Vertical Survival RPG, refactoring legacy systems to support new design requirements.
- Developed custom **Editor Tools** and content pipelines that significantly reduced iteration time for game designers.
- **Mentored junior developers** on Unity best practices, ECS patterns, and scalable system design.

Bytetyper   Sep. 2021 – Dec. 2022
Game Developer   Ankara, Turkey
- Managed the full-cycle development of **20+ hypercasual prototypes**, collaborating directly with art and design teams.
- Successfully shipped **2 top-chart launches** by optimizing rapid prototyping workflows.

PROJECTS

Purpose Network Engine | *C++, Unity, ENet*
- **Zero-Allocation Architecture**: Engineered a memory-pooled network stack in C++, eliminating heap fragmentation and GC overhead during high-frequency gameplay loops.
- **Hybrid Architecture**: Built a dedicated **C++ Authoritative Server** communicating with a Unity Client via a custom bit-packed, delta-compressed UDP protocol.
- **Competitive Netcode**: Implemented **Client-Side Prediction** with **Server Reconciliation** to ensure responsive movement, effectively mitigating 200ms+ latency and packet loss.
- **Lag Compensation**: Engineered a **Server-Side Rewind** system (128-tick history buffer) to validate hit-scans against historical hitboxes.
- **Scalability**: Developed **Spatial Grid Interest Management (SGIM)** to cull entity updates, supporting **1,000+ concurrent bots** with minimal bandwidth usage.

Game Jam Awards
- **ATOS (Magara Jam #3)**: 2nd Place / 600+ entries.
- **The Last Session (Magara Jam #5)**: 6th Place / 300+ entries.

LEADERSHIP & VOLUNTEERING

Global Game Jam (ATOM)   Jan. 2026
Technical Mentor   Ankara, Turkey
- Selected by **ATOM** (Animation Technologies and Game Development Center) to mentor jam participants.
- Provided technical guidance on Unity architecture, scope management, and debugging complex gameplay logic.

EDUCATION

Hacettepe University   Sep. 2017 – June 2021
Bachelor of Science in Computer Engineering   Ankara, Turkey