JONATHAN PEARL

Core Gameplay and Server Engineer

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Core Competencies: Fun and Fairness, Modern C++, Networked Gameplay
Additional Skills: Game Physics, ECS, Agentic Development, C#/.NET, Playful Video Editing

EXPERIENCE

Fortis Games

C#, Unity, C++, Git

Principal Gameplay Engineer *06/2024 – 11/2026*
Staff Gameplay Engineer *03/2023 – 06/2024*

- Architected declarative prediction and rollback netcode for a server authoritative realtime multiplayer game, focusing on immediate feedback while supporting poor mobile connections and remaining competitive
- Created all core moment-to-moment gameplay systems including combat, physics, and enemy behaviors, driven by visual scripting to give designers full expression while maintaining determin-"ish"-tic server authority and being fully predictable
- Designed the above systems to be completely driven through data, allowing content such as new enemies, heroes, and maps to be deployed or feature-flagged without requiring a new build
- Developed client-side runtime and data anti-tamper measures for cheat detection heuristics on a different title
- Built agentic AI pipelines for feature development as well as automated performance testing and profiling
- Mentored and empowered career growth of two other engineers as a manager

Meta

C#, Unity, VR, Hack, Mercurial

Gameplay Engineer - Horizon Worlds *10/2021 – 01/2023*

- Led cross-functional effort to implement and launch new physical motion controls through scriptable springs
- Championed first party experiences, embedding as engineer point of contact to unblock design and optimize runtime
- Improved gameplay e2e testing by implementing waypoint navigation and articulating test players through script

Blizzard Entertainment

C++, Kafka, C, Python, LUA, Premake, Linux, Git

Senior Software Engineer *08/2019 – 09/2021*
Software Engineer *07/2017 – 08/2019*

- Reduced frame update packet size by designing and implementing codegen for automatic runtime delta generation
- Architected low-latency message at-most-once routing for new Battle.net HA initiative powered by Kafka
- Company-wide Kafka contact maintaining internal C driver and contributing changes back to upstream OSS librdkafka
- Improved CI automation and internal package manager developer experience with tool authoring and codegen magic

Microsoft

C++, Havok, Python, ASM, Perforce

Havok Developer Relations Engineer *10/2015 – 07/2016*

- Provided expertise to customers on AAA game development leveraging Havok in 3D Physics, AI, and Animation
- Maintained key client relationships by providing direct support and creating tools that solve customer-unique problems
- Debugged and optimized clients' code through crash dumps and disassembly on affected platforms and consoles

React! Games

C#, Unity, Java, SVN

Game Engineer *02/2015 – 09/2015*

- Wrote asset manager to synchronize audio assets with Google Drive and automate localization mappings for producers
- Streamlined designers' and artists' workflow by creating automated tools and custom asset editors for VFX in Unity
- Ported *The Sleeping Prince* from iOS to Android - featured on Google Play Store and Amazon Underground

EDUCATION

Neumont College of Computer Science – *B.S. Software and Game Development (Valedictorian)*