

SUMMARY

Gameplay Programmer with 3+ years of experience in Unreal Engine 4 & 5, skilled in C++, Blueprints, and Gameplay Ability System (GAS). Shipped *Nightingale* and *Thrive: Heavy Lies the Crown*, developing gameplay systems for encounters, procedural world generation, AI, and animation. Proven track record of cross-functional collaboration, solving complex high-impact problems through effective communication and adaptability. Dedicated to continuous learning to support my team and deliver meaningful gameplay experiences for players.

TECHNICAL SKILLS

Languages: C++, C#, Blueprints

Game Engines: Unreal Engine 4 & 5, Unity 3D

Gameplay Systems: Encounters, Procedural World Generation, AI, Animation, Gameplay Ability System (GAS)

Networking: Replication, Photon Engine

Debugging/Profiling: Unreal Insights, Gameplay Debugger Tool, Visual Logger

Version Control: Perforce, Git, Plastic SCM

Development Tools: Rider, Visual Studio, Jira, Confluence

PROFESSIONAL EXPERIENCE

Inflexion Games

Edmonton, AB

Gameplay Programmer II — May 2024 - Nov 2024

Gameplay Programmer — Apr 2022 - Apr 2024

- Shipped *Nightingale*, a multiplayer survival crafting game built in Unreal Engine 5 using C++ and Blueprints, into Early Access and maintained various gameplay systems including encounters, procedural world generation, AI, and animation in Live Service.
- Owned major components of the encounter system, a multiplayer event system combining various aspects of *Nightingale*'s gameplay, including puzzle, combat, building, and traversal encounters, persistence, replication, presentation systems, automated testing, and debug tooling.
- Acted as the primary point of contact for the encounter system, collaborating cross-functionally with other gameplay teams to align features with the game's vision, maintain the integrity of other systems, and identity fun gameplay experiences.
- Spearheaded data authoring improvements through validation tools, automation, rulesets, and streamlining the development of new POIs and encounters, reducing bugs by 80% and significantly cutting down time spent on authoring and debugging.
- Developed an editor tool for previewing and validating EQS queries, eliminating 95% of creature-spawning bugs.
- Bridged the gap between encounter and AI systems, adding boss support, improving close-quarters combat, revamping enemy distribution, centralizing the spawning system, and supporting the development of new creatures and creature-centric POIs.
- Enhanced the spawning system by enabling custom EQC authoring and querying in C++, allowing for bespoke spawn locations and rule-based creature spawning, and a 97% reduction of EQS assets.
- Developed level design actors including pickups that grant progression unlocks, gameplay abilities (GAS), and currencies, interactable structures, and tileset actors including gates, pressure plates, and bustable walls, encouraging exploration and greater POI engagement.
- Supported the creation of procedurally generated dungeons and world through the development of POI distribution systems and designer tools, enabling precise placement of bespoke content alongside procedural elements.
- Provided mentorship for junior team members, cross training for designers, and established a daily encounter review to inform and enable the wider team to contribute to the creation of new encounters and POIs.

Zugalu

Calgary, AB

Gameplay Programmer / Web Developer — Feb 2021 - Feb 2022

- Credited on *Thrive: Heavy Lies the Crown*, a multiplayer city builder RTS game built in Unity3D using C#, and led the design and development of core gameplay systems including the weather system, territory manager, and daily event system.
- Coauthored a Discord chat game, engaging our community, quadrupling our message count, and achieving Discord partnership.

PROJECTS

Survival Crafting Roguelike — *In Development*

- Survival crafting roguelike developed using my Wave Survival Game framework.
- Implementing features including procedural map generation using Perlin noise and level streaming for POIs, an inventory system, melee combat, and survival mechanics, using Unreal's Gameplay Ability System.

Wave Survival Game — *2025*



- Third-person wave survival game developed in Unreal Engine 5 using C++ and Blueprints.
- Implemented character movement, an interaction component, an action/attribute system (GAS-inspired), hitscan and projectile attacks, pickups, enemy AI, an event-driven UI system, game mode logic, and optimizations including async asset loading.

Procedural Animation Study — *2025*



- Procedurally generated scorpion walk cycle developed using Control Rig in Unreal Engine 5.
- Implemented a Control Rig Forward Solve algorithm that calculates the location of each leg's step using sphere traces, locking/unlocking each leg until it reaches a distance threshold, and cycling through each leg to simulate realistic movement.

EDUCATION

University of Calgary

Calgary, AB

Bachelor of Science in Computer Science, Minor in Philosophy — *Sep 2015 - June 2020*

VOLUNTEER EXPERIENCE

Sunago

Co-Founder — *Aug 2024 - Present*

- My wife and I founded a charity supper club called *Sunago*, where we've hosted over a dozen dinners and raised thousands of dollars for charities that combat food insecurity and support food education like Edmonton's Food Bank.