

# STEVE RICKLEY

PA • Open to Relocation • [steverickley1@gmail.com](mailto:steverickley1@gmail.com) • [Portfolio](#) • [LinkedIn](#) • [YouTube](#) • [Slammer](#) • [Hide Seek Survive](#)

## SUMMARY

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Gameplay engineer who builds server authoritative multiplayer solo. Ships a public build every Friday. Leads UE5 simulation and VR training engineering at Booz Allen Hamilton.

## GAMES

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**Slammer: Multiplayer FPS – Open Playtest on Steam** 9/2023 - Present

**Tech Stack:** UE5 (source built), C++, IRIS Replication, Epic Online Services Plus, Perforce, Behavior Trees, Steam Deck

- Built server authoritative lag compensation, rewinding capsule and head position snapshots up to 200ms to eliminate cross client hit effect desync. Host acts as the server, with architecture unchanged for dedicated.
- Bots use the same input functions as players, with no privileged state access or aim assistance. Role based behavior tree controls per role target selection and self-care behaviors like seeking cover to plate up.
- Created a fully data driven weapon pipeline across 5 DataTables: 32 weapons, 7 categories, 24 attachments, and zero hardcoded gameplay values. Designers can run balancing passes without engineering support.
- Designed a 12-component weapon system communicating through a mediator with zero component level replication. New weapons need no core system changes, covering semi-auto, full-auto, and bolt-action.
- Implemented bandwidth conscious replication using UE5 IRIS with compressed movement flags, client computed timers derived from server world time, and dual mesh animation tick suppression.
- Publish a dev log every Friday explaining what shipped or why it didn't, on a weekly public release cadence.

**Hide Seek Survive: First Person Horror – Released on Steam**

5/2020 - 9/2025

**Tech Stack:** Unreal Engine 5, C++, Blueprints, Behavior Trees, Level Streaming, Steam, UMG

- Rebuilt and re-released the game in 2025 using UE5 AI Perception to drive a monster that shifts between patrol, hunting, and flanking when the player camps, based on player progress and jumpscare cooldown.
- Built a level streaming room shuffle that makes the house feel unreliable: closing a door rolls a new variant or quietly resets moved furniture. 7 room types, 4 variants each, with navmesh updates on layout change.
- Targeted console equivalent hardware, holding 60+ FPS on GTX 1060 class GPUs through tick gating and overlap driven systems, with full controller support and context sensitive prompts that adapt to input device.

## EXPERIENCE

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**Booz Allen Hamilton: Lead Gameplay Engineer**

8/2022 - Present

**Tech Stack:** UE5, C++, Behavior Trees, DetourCrowd, Plastic SCM, Quest 3, HoloLens, HTC Vive, Linux

- Built a real time crowd simulation scaling 300+ NPCs by runtime performance, with navmesh validated spawning and behavior tree driven stuck detection for cases like crowds funneling through a single door.
- Designed an interface driven save and load system where furniture, camera, and lighting each persist independently across 2,000+ runtime spawned actors, pooled to hold frame rate on large scenes.
- Built a VR marksmanship training module simulating a smart scope trigger interlock, with custom ballistics and dual FOV rendering holding 60 FPS on Quest 3 to stay under the motion sickness threshold.

**Unreal Engine 5 Tutorial Series: Creator (YouTube)**

4/2024 - Present

- 15-hour Beginner to Pro series covering replication, C++, UE5 built from source, and Perforce server setup.

**Raytheon: Senior Systems Engineer**

8/2018 - 7/2022

- C++ and MATLAB tooling for radar verification and sensor modeling on ballistic missile test programs.

## EDUCATION

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**Villanova University:** MS Mechanical Engineering 2017-2018 • BS Mechanical Engineering 2013-2017