

TIANCHENG (JOHNNY) GENG

Gameplay Engineer | C++ | Multiplayer FPS Systems & Content | University of Southern California

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PROFESSIONAL SUMMARY

Gameplay Engineer with 3 years of AAA development experience at Treyarch across Call of Duty: Modern Warfare III, Black Ops 6, and Black Ops 7. Specialized in multiplayer gameplay systems and content using C++, with end-to-end ownership from prototyping and iteration through ship and live-service maintenance. Experienced in cross-platform development, runtime performance optimization, designer-facing tooling/tunables, and cross-disciplinary delivery.

TECHNICAL SKILLS

Programming: C++, GSC (Proprietary Game Script Code), Python, C#, Java, SQL

Engines & Gameplay: Call of Duty Engine, Unreal Engine 5, Unity; multiplayer gameplay, weapon systems, vehicle systems, scriptable systems, gameplay progression, networking, runtime performance optimization

Tools: Visual Studio, Visual Studio Code, Perforce, Git, Proprietary JQProf Profiler, GitHub Copilot

AI Skills: Utilization of OpenAI and Anthropic Claude models via GitHub Copilot for feature implementation, debugging, and runtime performance optimization

Languages: English, Mandarin Chinese

PROFESSIONAL EXPERIENCE

Treyarch | Activision Publishing | Xbox

Los Angeles, CA | May 2023 - Sep 2026

Senior Associate Gameplay Engineer

Sep 2026

Associate Gameplay Engineer

Jul 2024 - Aug 2026

Student Associate

Jan 2024 - May 2024

Gameplay Engineering Intern

May 2023 - Aug 2023

- Developed, maintained, and troubleshooted multiplayer gameplay systems and content in native C++ and Treyarch's GSC scripting language within the Call of Duty cross-platform engine, including weapon, vehicle, and scriptable systems.
- Partnered with game designers to iterate core multiplayer content, implement feature requests, and expose tunable gameplay parameters that enabled faster balance and design iteration without repeated engineering changes.
- Collaborated with audio designers, model artists, VFX artists, animators, and other partner disciplines to integrate assets and deliver polished, production-ready gameplay features.
- Profiled and optimized existing gameplay code to improve runtime performance while debugging complex cross-system issues across a shared codebase.
- Worked closely with production and stakeholders to scope work, communicate risks and blockers, and deliver milestone targets on schedule.

SHIPPED TITLES & GAMEPLAY OWNERSHIP

Call of Duty: Black Ops 7 | Multiplayer

2025

- Built and shipped the gameplay-side foundation for the new Overclock progression system, recording qualifying gear usage (such as kills and assists), updating backend player progression records, and driving upgrade eligibility surfaced by the frontend UI.
- Implemented and maintained 80%+ of Overclock content across the Multiplayer Equipment, Field Upgrade, and Scorestreak portfolio, supporting progression-driven upgrades from initial implementation through post-launch tuning and bug fixing.
- Owned 10 Multiplayer gameplay features from initial prototype through iterative development, final shipment, and post-launch maintenance, while also supporting carry-forward and new content as needed.
 - **Lethal / Tactical Equipment:** Cluster Grenade (secondary cluster explosives), Needle Drone (dual mode explosive drone), EMP Grenade (electronic disruption), and Pinpoint Grenade (enemy detection and tracking).
 - **Field Upgrades:** Active Camo (temporary partial invisibility), Drone Pod (enemy-seeking aerial drones), Echo Unit (holographic soldier decoy with objective utility), and Mute Field (temporary stealth capabilities).
 - **Scorestreaks:** EMP Systems (large-scale electronic disruption) and Iron Rain (player-controlled aerial ordnance platform with a bird's-eye battlefield view).

Call of Duty: Black Ops 6 | Multiplayer

2024

- Supported late-production Multiplayer content iteration and bug fixing across Equipment, Field Upgrades, and Scorestreaks, including C4, Semtex, Proximity Alarm, Spring Mine, Trophy System, UAV, Care Package, Watchdog Helo, and related content.

Call of Duty: Modern Warfare III | Multiplayer

2023

- Improved internal development and testing workflows by extending automated testing-bot support, enabling developers to validate gameplay features more efficiently late in production.

ENGINEERING IMPACT & TOOLING

- Joined Black Ops 7 during project initialization and helped stand up core Multiplayer content infrastructure, including game mode settings, score events, gameplay content lists, and developer testing support.
- Ported and audited carry-forward Multiplayer content, including wildcards and gameplay registries, while using feature groups and gating to keep seasonal content from leakage during development.
- Added internal development bot support to accelerate local iteration and repeatable testing for designers and engineers, reducing friction when validating gameplay changes.
- Utilized debugger breakpoints, call stacks, and proprietary profiler to reproduce gameplay issues, profile runtime hotspots, and validate performance fixes in multiplayer scenarios.
- Documented new systems and implementation patterns, and communicated estimates, blockers, and visual progress updates with design and production to keep cross-disciplinary milestone work aligned.

ADDITIONAL EXPERIENCE

University of Southern California | Course Producer, Gameplay Programming Aug 2022 - Dec 2023

- Supported 100+ students across C++ and Unreal Engine 5 gameplay programming courses through weekly office hours, hands-on debugging support, and programming/math instruction.
- Conducted code-quality reviews and provided actionable feedback on gameplay programming assignments, reinforcing maintainable C++ practices and debugging fundamentals.

EDUCATION

University of Southern California	Los Angeles, CA
Master of Science in Computer Science GPA: 3.80 / 4.00	May 2024
Bachelor of Science in Computer Science Games GPA: 3.94 / 4.00	Aug 2023