Rodrigo Vicencio-Moreira

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SUMMARY

Senior Gameplay Engineer with 9+ years of experience developing AAA games and gameplay systems in C++ and Unreal Engine 4/5. Experienced in first- and third-person shooters, combat systems, character locomotion, inventory, networking, and Gameplay Ability System (GAS). Experience guiding engineering teams as a technical lead, establishing development standards, mentoring students and junior developers, and collaborating across design, animation, and production. Academic research background in player skill balancing in multiplayer FPS games. Credits include *Halo Infinite* and multiple Unreal Engine prototypes.

EXPERIENCE

Independent Game Developer
2025 - Present

Designing and developing *Jelly Polo*, a 3v3 multiplayer underwater sports game in Unreal Engine 5. Responsible for core gameplay systems, multiplayer functionality, and technical infrastructure, including Perforce version control, Unreal Horde build automation, and automated build pipelines.

Senior Software Engineer, SkyBox Labs
2018 – 2025

Gameplay engineer on *Halo Infinite* before transitioning to the studio's new IP division. Established engineering practices, including code reviews, C++/Blueprint standards, and onboarding processes, to improve code quality and team collaboration. Managed three direct reports and collaborated across engineering, design, animation, and production.

- *Sparkle (2025) - Third-Person Multiplayer Extraction Shooter | C++ / Unreal Engine 5 | Prototype*
  - Lead gameplay programmer, implementing scoring systems, match rules, UI, and GAS-based player abilities, within a server-authoritative networking architecture.
- *Willingdon (2023–2025) - Third-Person Parkour Action-Adventure | C++ / Unreal Engine 5 | Prototype*
  - Served as technical lead for a team of five programmers, collaborating closely with design to guide technical decisions, manage scope, and deliver stable, polished gameplay demos.
  - Key implementation contributions include parkour/locomotion system, inventory system, and expanding melee systems to handle synchronized choreography attacks.
- *Colony (2022–2023) - Action-Adventure Horror | C++ / Unreal Engine 5 | Prototype*
  - Led prototyping of core gameplay mechanics. Designed and built a flexible melee and ranged combat system that was later adopted by subsequent projects and other prototype teams.
- *Halo Infinite (2018–2022) - First-Person Shooter | C++ / Slipspace Engine*
  - Gameplay engineer on the sandbox team, collaborated with designers to iterate on gameplay features and UI, contributed to performance improvements, and helped launch the game.
  - Developed gameplay weapons, equipment, and abilities, supporting both single-player and multiplayer gameplay through server-authoritative logic, replication, and serialization.
  - Developed and optimized HUD systems, equipment-switching interfaces, and PC input support, including keyboard controls, key rebinding, and controller mappings.

Industry Mentor | Teacher, Vancouver Film School
2017 – 2025

Mentored game development students, providing technical guidance, code reviews, and feedback on game projects. Taught Programming 2 (C++ & OOP); designed assignments and delivered lectures.

Software Engineer 2, Capcom Game Studio Vancouver
2016 - 2018

Gameplay engineer on unannounced third-person action-adventure game (Unreal Engine 4 / C++) targeting PC and PlayStation 4. Built melee & ranged combat, camera systems, and aim-assist mechanics.

Programmer, Alientrap
2015 - 2016

Programmer contributing to two Unity-based PC and mobile titles:

- *Maximum Override (PC, Unity):*
  Implemented AI and UI features, gameplay, and game modes
- *Autocraft (PC/Mobile, Unity):*
  General programmer and worked on upgrading from Unity 4 to 5, adapting game to mobile

SUMMARY OF SKILLS

Languages: C++, Blueprints, C#

Game Engines: Unreal Engine (4 & 5), Slipspace, Unity

Gameplay Systems: Combat (melee & ranged), UI/UX, performance optimization, locomotion/parkour systems, GAS (Gameplay Ability System)

Multiplayer: Networked gameplay, replication, server-authoritative gameplay

Leadership: Technical leadership, mentoring, code reviews, maintaining high engineering standards

Research & Design: Experience designing and conducting academic studies on player skill balancing in multiplayer FPS games, including experimental methodology, data analysis, and communicating research findings.

EDUCATION

Master of Science, Computer Science 2016
University of Saskatchewan
Thesis involved developing and testing techniques to balance players of differing skill levels in multiplayer FPS games. The testing environment was built using UDK and involved conducting controlled laboratory experiments and data analysis of the results.

Bachelor of Science, Computer Science 2013
University of Saskatchewan
High Honours

SELECTED PUBLICATIONS

Vicencio-Moreira, Rodrigo. (2016) **Player Balancing for First-Person Shooter Games.** University of Saskatchewan Master's thesis.

Vicencio-Moreira, R., et al. (2015). **Now You Can Compete With Anyone: Balancing Players of Different Skill Levels in a First-Person Shooter Game.** CHI 2015. 2255-2264. (Honorable Mention)

Vicencio-Moreira, R., et al. (2014). **Balancing Multiplayer First-Person Shooter Games using Aiming Assistance.** IEEE GEM 2014. 77-84. (Best Paper)