

Renan Macedo

UNITY / UNREAL GAME DEVELOPER | GAMEPLAY PROGRAMMER | XR DEVELOPER | REAL-TIME INTERACTIVE EXPERIENCES

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PROFESSIONAL SUMMARY

Multidisciplinary Game Developer and Gameplay Programmer with 10+ years of software development experience and a strong background in Unity, Unreal Engine, VR/XR, multiplayer systems, procedural generation, UI/UX, and interactive real-time experiences. Developed games, immersive Meta Quest applications, gamified educational platforms, and corporate simulations. Published technical articles on 80 Level (80.lv) covering Unreal Engine procedural generation workflows. Experienced in full-cycle development, from game design, prototyping, and gameplay implementation to launch support and live-product evolution.

SELECTED IMPACT

Multiplayer VR experiences for Meta Quest | **Full-cycle game development for A Jornada** | **80.lv contributor on Unreal Engine procedural generation**

Gamified learning platforms and educational content | **Real-time systems with dedicated-server and WebSocket architectures** | **10+ years in software development**

CORE EXPERTISE

Game Development: Unity, Unreal Engine, C#, gameplay programming, game design, gameplay loops, grid-based mechanics, UI/UX, launch support

XR & Multiplayer: VR/XR development, Meta Quest, multiplayer architecture, dedicated-server systems, real-time networking, user replication, immersive interactions

Technical Art & Tools: procedural generation, Unreal Engine PCG workflows, Virtual Production, Aximmetry, motion capture, real-time rendering

Additional Engineering: Dart, Flutter, WebSockets, Firebase, REST APIs, JSON data modeling, Git; working knowledge of C++ (Unreal) and Python

PROFESSIONAL EXPERIENCE

Rede Novo Tempo de Comunicacao - Game Developer / XR Developer / Virtual Production Technical Lead

Brazil | Mar 2018 - Present

- Developed games and interactive applications, including **A Jornada**, contributing to game design, team coordination, gameplay programming, UI/UX, and launch support.
- Built VR solutions and immersive real-time experiences for events, technology demonstrations, and virtual production workflows.
- Acted as technical lead for Unreal Engine and Aximmetry pipelines, managing virtual environments, motion capture, animation rendering, and real-time integrations.
- Worked across multidisciplinary teams, connecting gameplay, software engineering, design, content production, and interactive technology.
- Also led development of cross-platform applications and cloud-connected products, strengthening experience with backend integration and live-product maintenance.

CodeBuddy - Game Development Teacher, Developer & Educational Content Creator

Brazil | 2016 - 2018

- Taught game programming, game design, app development, robotics, and gamification for children and teenagers.
- Created educational materials and gamified learning content used by the school network in Brazil.
- Developed the teaching platform used by the units until 2019.

SELECTED PROJECTS

A Jornada | Game Design, Gameplay Programming, UI/UX, Launch Support

Turn-based puzzle game inspired by Lara Croft GO. Worked on the core gameplay loop, grid-based movement mechanics, player experience, environmental interactions, UI/UX implementation, production coordination, and launch activities.

Tracbel VR | Unreal Engine, Multiplayer VR, Meta Quest

Real-time multiplayer VR experience for remote product demonstrations. Implemented user management, networking, and replication systems with dedicated-server support, enabling connected users to interact with life-size visualizations of Volvo heavy machinery.

SESI & Equatorial Energia VR Safety Simulations | Unreal Engine, Meta Quest

Developed immersive workplace-safety training simulations for NR35 Working at Heights and NR33 Confined Spaces scenarios, with guided interactions and real-time VR experiences.

Character Craft 5.5e | Flutter, WebSockets, Firebase, RPG Systems

Created a cross-platform RPG companion app with **12,000+ downloads in its first 10 months**. Designed advanced RPG data structures and rebuilt online rooms by migrating real-time synchronization from Firebase Firestore to a **WebSocket-based architecture**, demonstrating backend, multiplayer, and live-product ownership.

Procedural Generation Studies | Unreal Engine

Designed procedural content workflows in Unreal Engine, including a medieval village generator and experiments with the UE5.2 Procedural Content Generation Framework.

PUBLICATIONS & THOUGHT LEADERSHIP

80 Level (80.lv) - Technical Articles

- [Procedural Medieval Village Generator Set-up in Unreal Engine 5](#)
- [Experimenting with UE5.2's Procedural Content Generation Framework](#)

TECHNICAL SKILLS

Games: Unity, Unreal Engine, C#, gameplay programming, game design, gameplay systems, UI/UX, multiplayer architecture, procedural generation

XR & Real-Time: Meta Quest, VR/XR, dedicated-server networking, replication systems, Virtual Production, Aximmetry, motion capture workflows

Additional Engineering: Dart, Flutter, WebSockets, Firebase (Firestore, Auth, Cloud Messaging, App Check), REST APIs, JSON, Git

Additional Languages: JavaScript / TypeScript; working knowledge of C++ (Unreal) and Python

EDUCATION

Technology Degree in Digital Games - Universidade FUMEC, Belo Horizonte, Brazil | 2013 - 2016

LANGUAGES

Portuguese - Native | English - Advanced