Anderson Gonçalves

PORTO ALEGRE, BRAZIL. OPEN TO REMOTE WORK.

Gameplay Programmer and Full Stack Engineer · Unreal Engine 5/C++, Unity/C# · Python/FastAPI, Java, Angular · MSc at UFRGS on control and decision-making

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I write gameplay code and the services behind it. Four years of production engineering came first (Python, FastAPI, Java, PostgreSQL, RabbitMQ, Docker, CI/CD), and that is why my Unity and Unreal projects get architected instead of improvised. The week splits three ways today: a production platform in Python and Angular, solo Unity releases under the Vertex Shift label, and an MSc at UFRGS on control and decision-making, where HTN, GOAP and reinforcement learning are studied with NPCs as the test bench.

Based in Porto Alegre, Brazil (UTC−3). Open to remote contracts and to relocation, for gameplay programming as much as for backend and full stack roles.

Experience

Mar 2026 – present
Porto Alegre, BR · Remote
Game Dev
AI Research

Researcher — control and decision-making for autonomous agents

Universidade Federal do Rio Grande do Sul · Fixed term

- Research and implement decision-making and control for agents acting under partial information, with reinforcement learning, hierarchical task networks and goal-oriented action planning.
- Design hybrid architectures where HTN handles strategic decomposition, GOAP handles contextual goal selection and multi-objective RL improves execution policies.
- Build simulated environments and controlled experiments on NPCs, measuring responsiveness, adaptability, computational cost, scalability and behavioral interpretability.
- Translate research into modular architectures and implementation patterns fit for commercial engines.

Reinforcement Learning, HTN, GOAP, Multi-agent, Python

Nov 2025 – present
Remote
Game Dev

Solo Gameplay Programmer

Vertex Shift · Self-employed

- Ship independent game projects under the Vertex Shift label, from prototype to playable release.
- Implement enemy behavior, state machines, progression, inventory, combat, wave spawning and dynamic difficulty.
- Run the whole pipeline solo: design, architecture, testing, version control, builds, documentation and portfolio presentation.

Unity, C#, Game Architecture, Data-driven Design

Nov 2025 – present
Remote
Full Stack

Full Stack Developer

econtrole — waste management software · Freelance

- Engineer a production platform for environmental compliance, tax, financial and logistics operations.
- Restructure a complex business platform with DDD and a modular-monolith-first strategy — bounded contexts and stable contracts that keep service extraction an option rather than a rewrite.
- Design event-driven workflows with transactional consistency, idempotency, retry policies and the transactional outbox pattern.
- Maintain 1,000+ passing automated tests across domain rules, use cases, APIs, persistence, workers and integrations.
- Built the observability stack — Grafana dashboards, Jaeger tracing and correlation IDs that follow a request across asynchronous flows.

Python, FastAPI, Angular, PostgreSQL, Redis, RabbitMQ, Docker, Grafana, Jaeger

Apr 2025 – Apr 2026
Goiânia, BR · Remote
Full Stack

Mid-Level Backend Software Engineer

Centro de Excelência em Inteligência Artificial (CEIA) · Full time

- Engineered asynchronous REST APIs and backend services for AI-driven platforms.
- Applied DDD, hexagonal architecture and strict separation between domain, application and infrastructure.
- Wrote automated tests across domain rules, use cases, API contracts, persistence and integration scenarios.
- Turned AI research and product requirements into reliable production software with multidisciplinary teams.

Python, FastAPI, PostgreSQL, Docker, Hexagonal Architecture, TDD

Nov 2024 – Apr 2025
Goiânia, BR · Hybrid
Full Stack

Mid-Level Full Stack Developer

TOTVS Brasil Central · Full time

- Built an internal RAG assistant indexing 10+ GitLab repositories into a MongoDB-backed vector database, for code discovery and onboarding.
- Automated Jira time-entry synchronization and recurring reporting with n8n, cutting manual work.
- Developed license-management tools and internal integrations across engineering and business operations.

Python, Java, TypeScript, Angular, React, Spring Boot, MongoDB, n8n

Nov 2023 – Nov 2024
Goiânia, BR
Game Dev

Game Developer — Unreal Engine / C++

LabTIME / UFG

- Wrote gameplay systems in C++/Unreal Engine 5 on the Gameplay Ability System, including a plugin built for modularity and reuse across projects.
- Simulated the NPCs of the environment with Unreal behavior trees combined with needs-based (utility) AI.
- Took part in architecture, debugging, technical documentation and code review with a multidisciplinary team.

Unreal Engine 5, C++, Gameplay Ability System, Behavior Trees, Utility AI, Plugins

Oct 2021 – Aug 2023
Goiânia, BR
Full Stack

Full Stack Software Engineering Intern

TOTVS

- Maintained and evolved ERP modules on a legacy-heavy stack.
- Built ETLs, optimized algorithms, documented legacy systems and automated pipelines with GCP, Terraform and Azure DevOps.

Java, Spring Boot, Angular, SQL Server, Python, Node.js, GCP, Terraform

Teaching

2026
Porto Alegre, BR

Instructor — Systems Programmer course

Senac RS

- Database unit (UC2): 19 sessions authored from scratch, published as open HTML slides.

2021 (×2) and 2023–2024
Goiânia, BR

Teaching Assistant — three terms

Universidade Federal de Goiás (UFG)

- Twelve weekly hours per term, including a volunteer term teaching Introduction to Computing for Electrical Engineering.
- Supported students one to one — including learners with disabilities — and backed the supervising professor through Moodle and Teams.

Education

Feb 2026 – Mar 2028
Porto Alegre, BR

Master's degree — Artificial Intelligence

Universidade Federal do Rio Grande do Sul (UFRGS)

- Institute of Informatics, track: Planning, Multi-Agent Systems and Robotics, supervised by Prof. Lucas N. Alegre.
- Research: control and decision-making under partial information, combining reinforcement learning with GOAP and HTN. The NPC is the test bench, and believable behavior is the pass mark the game imposes.

Feb 2020 – Jun 2025
Goiânia, BR

BSc in Information Systems

Universidade Federal de Goiás (UFG)

- 3,000-hour interdisciplinary degree across computer science, management and IT: requirements engineering, software architecture, databases, security and human-computer interaction.
- Includes a practical residency project and complementary activities. Final average 8.5.

Skills

Games	Unity, Unreal Engine 5, C#, C++, Gameplay Ability System, State Machines, Data-driven Design
Game AI	HTN, GOAP, Behavior Trees, Utility AI, Reinforcement Learning, Multi-agent, Pathfinding
Backend	Python, FastAPI, Java, Spring Boot, REST APIs, RabbitMQ, Redis
Frontend	TypeScript, Angular, React
Data	PostgreSQL, SQL Server, MongoDB
Architecture	DDD, Clean Architecture, Hexagonal, SOLID, Event-driven, TDD
DevOps	Git, Docker, CI/CD, GCP, Azure DevOps, Terraform, Grafana, Jaeger

Certifications

- Game Design and Development 1: 2D Shooter — Michigan State University (May 2026)
- Advanced Topics on Software Testing and Quality Assurance — UFG (Aug 2024)

Languages

- Portuguese — native
- English — advanced (C1, professional use)