Ty (Timur) Radman

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Summary

Gameplay engineer with 6 years building game systems and developer tools, primarily in Unity and C#, with production work in Unreal Engine and C++. Experience spans live interactive installations, client VR, and networked multiplayer. Focused on maintainable architecture and editor tooling that removes manual, error-prone steps for teammates.

Experience

Jun 2025 - Present

Software Developer · *Graffiti+ (Tangible Interaction), Vancouver*

- Refactored the core codebase, reducing its size ~30%, and onboarded a new developer onto it.
- Shipped and supported the application across 20+ live events for clients including NASCAR, Formula 1, and Amazon, including same-day changes made on site.
- Replaced manual, error-prone setup with Unity tooling (build debugger, metadata-based asset packing with validation, printing framework, shader-based brushes), cutting build failures for new and existing developers.
- Automated 3D model-to-paintable conversion, removing a hand-built step that regularly introduced errors.
- Expanded the painting system with paint depletion and shake-to-recharge, neon glow, eraser, paint fade, and brush scaling by physical screen width.
- Integrated Gemini image generation to create black-and-white stencils on demand, fed directly into the painting system.

Jan 2025 - Present

Co-Founder · *Retro Storm Studio, Vancouver*

- Define milestones and scope for Tank Lore, a Unity roguelike, through to its upcoming Steam release.
- Run weekly engineering meetings and maintain the team kanban board.
- Implemented random level generation and an in-editor map creation tool.
- Built the local multiplayer mode.
- Design test plans, run playtests, and act on the results.

Links: Project · Video · Steam · Trailer

Jan 2024 - May 2024

Unity VR Developer · *Metro Vancouver ("Discover the Unseen"), client project through the Centre for Digital Media*

- Developed the VR experience in Unity using the XR Interaction Toolkit and C#.
- Integrated the ArcGIS SDK into the experience per client request.
- Translated client requirements and feedback into scoped work, and documented the implementation for handover.
- Won Gold and Silver Horizon Interactive Awards; showcased at the Pacific National Exhibition.

Links: Project · Video · Award

Sep 2023 - May 2024

Unreal Engine Developer · *Centre for Digital Media ("Boss Lab"), Vancouver*

- Developed core mechanics including the projectile system and AI behaviors using C++ Behavior Trees.
- Implemented UI systems for the game's skill selection and equipment.
- Collaborated in an agile environment across iterative development cycles and team code reviews.

Links: GitHub · Project · Video

Sep 2023 - May 2024

Instructional Assistant · *Centre for Digital Media, Vancouver*

- Reviewed student assignments and gave feedback on their implementations.
- Assisted faculty in preparing and delivering course material.

Projects

Swordslike · **GitHub** · **Project**

Unreal Engine 5 (UE5) | C++ | Multiplayer Subsystems | Steam Subsystems

- Implemented multiplayer gameplay and session creation using Steam Subsystems, fully in C++.
- Developed a combat system with lock-on, combo attack queues, attack indicators, parry, stamina, and dodge rolls.
- Created a reusable multiplayer sessions UE package and a set of combo montage notifies.

Slashiro · [Project]
Unity 6 | C# | Netcode for GameObjects | Unity Gaming Services | Behavior Trees

- Built server-authoritative multiplayer on Netcode for GameObjects, with online play through Relay and Lobby and LAN discovery via custom UDP broadcast.
- Resolved damage, death, and respawn server-side to keep state consistent across clients; verified on long-distance connections.
- Designed a combat system around three networked resources (health, stamina, posture) and a four-tier parry scaling with timing accuracy.

Spatial Query System (Unity Tool) · [GitHub] · [Project]
Unity | C# | Editor Tooling | AI

- Built a modular generator/evaluator framework letting AI agents pick navigation targets by sampling and scoring points in space; custom components auto-register without setup.
- Shipped four point generators and five evaluators, each with weight, filtering, and priority settings.
- Implemented edit-mode execution with a configurable debug visualizer, so designers tune scoring without entering play mode.

Teams Editor · [Project]
Unity | C# | Systems Design | Editor Tooling

- Built a data-driven combat framework resolving faction relationships, targeting, and balancing from a single team assignment, replacing per-system wiring.
- Enabled AI targeting without per-unit logic, staying correct through mid-game faction changes such as possession.
- Added swappable runtime profiles so PvP, PvE, co-op, and free-for-all configurations are testable in one scene.

Behavior Tree System Framework (Unity Tool) · [GitHub] · [Project]
Unity | C# | UI Toolkit

- Built a custom AI behavior framework using Graph View, Editor Window, Custom Editor, and UI Toolkit.
- Replaced a state machine that had become unworkable on Tank Lore as enemy count grew.

Skills

C# | C++ | Unity | Unreal Engine | .NET | Netcode for GameObjects | Unity Gaming Services (Relay, Lobby) | Steamworks | XR Interaction Toolkit | UI Toolkit | Shader Graph | HLSL | Python | JavaScript | SQL | WPF | PlayCanvas | Git | Visual Studio | Rider | Jira | Blender

Education

2022 - 2025
Master of Digital Media · *Simon Fraser University, Canada*

2017 - 2021
Bachelor of Information Technology · *University of Aden, Yemen*