

Tolu Aina

XR Developer / Unity, Mixed Reality and Applied AR

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galdar.studio | [GitHub: github.com/tolu-ainaa](https://github.com/tolu-ainaa) | [LinkedIn](#)

PROFILE

Unity and C# XR developer building mixed reality and AR applications for Meta Quest, iOS, Android and the browser, with an MSc Computer Science (Distinction) and the Unity Junior Programmer and Unity Essentials pathways completed. Most of my work is applied rather than games: clinical assessment, accessibility, and training simulation for a university client. I have taken the same product from headset onto iOS and Android from a single codebase and published a reusable SDK to solve the cross-platform launch problem underneath it. Before engineering I spent four years directing a team of over 20 animators and 3D artists, which shows up in how I build: I think about interaction feel, spatial readability and how a thing moves before I think about the feature list.

TECHNICAL SKILLS

Unity and C# Unity 6, C# scripting and editor tooling, object-oriented design, game and application state management, physics and interaction systems, asset integration pipelines, real-time profiling and optimisation

XR platforms Meta Quest 2 and 3, Meta XR SDK, passthrough and mixed reality, hand tracking and controller interaction, spatial UI, ARKit and ARFoundation on iOS, ARCore on Android, markerless tracking and plane detection, WebXR and Immersive Web SDK, Snap Lens Studio and Camera Kit

Performance Frame budget and draw call reduction, asset and texture budgeting, LODs, build size and memory optimisation for standalone headset and handheld hardware, Profiler and Frame Debugger

3D and graphics PBR workflows, materials and lighting, blend shapes and skinned mesh work, Blender and Cinema 4D, glTF and FBX pipelines, Shader Graph at working level

Beyond Unity JavaScript and TypeScript, React, Next.js, Three.js and WebGL, Python, REST APIs, Firebase and Firestore, Supabase, Postgres, vision and language model integration, MediaPipe, Git and GitHub

SELECTED XR WORK

Builds, demos and case studies at galdar.studio, source on GitHub.

- **PainPath.** *Unity, C#, Meta Quest 3, Next.js, Firestore.* Mixed reality clinical tool letting patients place and describe pain markers on a 3D body model, with a clinician web portal reading the same data. Finalist at XRCC 2026 and pitched in Berlin. Judge feedback that the use case did not justify a headset for that audience led to a 3D web viewer version, which was the right call for the people using it.
- **Tic-Tac-Toe MR.** *Immersive Web SDK, WebXR, JavaScript.* One build running across Meta Quest, iOS and Android with cross-play between the three, plus an AI opponent and room-link multiplayer. Built partly to find out whether Meta's Immersive Web SDK was ready for production use.
- **LudoVR.** *Unity 6, C#, Meta XR SDK.* Room-scale VR board game built from scratch: physics-driven piece handling, turn and game state via state machines, grab interaction and multi-player turn legibility.
- **AR Asteroids.** *Unity, C#, ARKit, iOS.* MSc dissertation. Markerless AR game shipped to iOS with a comparative user study measuring immersion against the traditional version. Awarded Distinction.
- **@galdar/xr-launch.** *JavaScript, ARKit, ARCore.* Published SDK abstracting cross-platform AR launch behaviour on iOS and Android, built after evaluating a third-party service against a custom wrapper and deciding a maintainable in-house package was better long term.
- **Digital human prototype.** *Unity, blend shapes, lip-sync.* Talking head demo with viseme-driven lip-sync from audio and a separate expression layer handling brows, eyes and blink, deliberately layered so the two systems compose rather than fight over the same blend shapes.
- **WebAR Glasses Try-On.** *Three.js, MediaPipe, React, Vite.* Face-tracked eyewear try-on running in a mobile browser with no app install. Deployed live.
- **BSL Teacher.** *WebAR, vision model integration.* Computer vision tool reading hand shapes through the camera and returning live accuracy feedback for British Sign Language learners.

EXPERIENCE

Founder and Creative Technologist, GaldAR Studio 2024 to present

- Build XR and real-time applications end to end for clients, owning architecture, Unity and WebXR implementation, optimisation and release across headset, iOS, Android and web.
- Profile builds and cut asset and draw call budgets to hold frame rate on standalone and handheld hardware.
- Evaluate new XR hardware, SDKs and models as they land and decide what is worth adopting, then prove it by building on it.
- Run client discovery, scoping and technical reporting directly with stakeholders.

XR Consultant, Miva Open University *2025 to present*

- Advise on an AR/VR pilot programme including VR training simulations for nursing students covering patient handling and crisis scenarios.
- Authored the production pipeline and five-role XR team structure documents for the department.

Digital Workplace Service Technician, University of Chester *Jan 2025 to Oct 2025*

- Front-line technical support through ServiceNow in a small, high-volume team, diagnosing and resolving faults to SLA.

uLesson Group *2019 to 2024*

Held both roles concurrently across the group's education brands.

Animation Director, uLesson Education *2019 to 2024*

- Led a team of over 20 animators and 3D artists producing more than 400 pieces of content, setting technical and visual standards and unblocking artists on production problems.

Senior Motion Designer and AI Pipeline Lead, Miva University *Aug 2022 to May 2024*

- Designed and built an AI-assisted production pipeline, documented it and trained the team onto it. Roughly 67 percent efficiency improvement.

EDUCATION AND CERTIFICATIONS

MSc Computer Science, Distinction University of Chester, 2024 to 2025

Distinctions in Software Development Techniques (75) and Concepts of User Experience (82). Dissertation on translating traditional games to augmented reality.

Unity Learn Pathways Junior Programmer and Unity Essentials, completed

Level 5 Diploma in Management and Leadership (RQF) Focus Awards, in progress

BSc (Hons) Physiology University of Ibadan, Nigeria, 2018

Certificate in Augmented Reality Applications (2026). Responsive Web Design, freeCodeCamp (2026).