

FAREED TAHIR

Senior AR/VR Solution Architect | Unity XR Lead

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PROFESSIONAL SUMMARY

Senior AR/VR Solution Architect and Unity Lead with 6+ years of experience engineering high-performance spatial computing applications, mobile AR solutions, and enterprise VR simulations for **U.S. and global government agencies and Fortune 500-level clients**. Expert in Unity3D, C#, Meta Quest 3 SDKs, ARKit, ARCore, and WebAR frameworks (8thWall, Imagine WebAR). Proven track record leading full-lifecycle software delivery—from system architecture and backend API integrations to computer vision systems (OpenCV, Gaussian Splatting, LiDAR). Graduated as a **Gold Medalist in Computer Science**, combining strong academic excellence with proven industry leadership in shipping 50+ production-ready spatial products.

TECHNICAL SKILLS

- **XR Platforms & SDKs:** Meta Quest 3 SDK, VR Interaction Toolkit (VRIF), ARKit, ARCore, Vuforia, WebAR (8thWall, Imagine WebAR), AR Foundation, Mixed Reality Passthrough, Spatial Anchoring
- **Engine & Languages:** Unity3D (6+ years), C#, Python, C++
- **Computer Vision & Graphics:** Gaussian Splatting, LiDAR Photogrammetry & 3D Scanning, OpenCV Skeleton Tracking, Banuba Face SDK, Shader Optimization, Low-Poly Mesh Optimization
- **Backend & Web Integration:** AWS, Firebase (Auth, Firestore, FCM), RESTful APIs, Real-time WebSockets, WebGL, WalletConnect (Web3/NFT)
- **Mapping & Spatial Data:** Mapbox SDK, Location-Based AR, Geospatial GPS Tracking, Dynamic Pins
- **Tools & Workflows:** Visual Studio, Xcode, Android Studio, Git, Agile/Scrum Methodologies, Technical Documentation, Code Reviews

PROFESSIONAL EXPERIENCE

EggyStudio | Lead XR & Computer Vision Engineer

March 2025 – Present | Lahore, Pakistan (Onsite)

- Spearhead end-to-end technical architecture and development of cross-platform AR/VR solutions, WebAR experiences, and spatial computing tools for international enterprise clients.
- Engineered **VirtuEstate**, a Meta Quest 3 VR real estate walkthrough platform enabling high-fidelity property exploration with dynamic lighting and interactive navigation.
- Developed **Gaussian Splat VR Viewer** and **AnatomyLens VR** on Meta Quest 3, leveraging photorealistic 3D scene reconstruction and passthrough spatial anchoring for medical and architectural visualization.
- Built **FootHub**, an iOS LiDAR-based photogrammetry scanning app that reconstructs foot geometry into accurate 3D **.OBJ** models transmitted securely to web e-commerce backends via REST APIs.
- Designed real-time body tracking system integrating **Python + OpenCV** with Unity3D, mapping human skeletal joints directly to 3D character rigs for synchronized AR animation.
- Architected **AR Chess** with custom AI difficulty modes, Firebase user authentication, move calculation hints, and surface placement logic using ARKit and ARCore.
- Delivered **Garbage Truck VR Simulator** for Quest 3 featuring custom dual-hand steering, key ignition mechanics, and dashboard joystick controls for mechanical arm operations.
- Developed WebAR experiences (**8thWall / Imagine WebAR**) for zero-install product showcases and interactive 3D business cards with clickable spatial links.

EuphoriaXR | Senior AR/VR Developer & Project Manager

2019 – March 2025 | Lahore, Pakistan

- Promoted from XR Developer to Senior Lead and Project Manager, overseeing technical roadmaps, sprint planning, client communications, and delivery across 15+ complex enterprise projects.
- Resolved core stability issues in **Trail Explorer v1** and completely designed, architected, and built **Trail Explorer v2** from scratch for a **U.S. Government educational project**—incorporating dual markerless/marker-based AR, dynamic English/Spanish localization, accessibility subtitles, GPS location tracking, and interactive trail map pins.
- Served as Senior Developer on **HajjMetaverse** (Saudi Arabia Government), architecting full backend structures, avatar customization pipelines, progress tracking, and UI-to-API integrations.

- Led core technical implementation for **DexiHunter**, a location-based AR app with real-time Mapbox map consumption, NFT wallet connections (WalletConnect), live chat, and AR item collection.
- Built **PokeXR**, an AR short-video social platform featuring automated server-side background removal, spatial video feeds, user relationship management, and FCM push notifications.
- Architected location-based AR apps including **Wadzzo**, **Actions**, and **SocialEyez**, implementing spatial coordinate drop points, geographic radius filters, and AWS backend syncing.
- Mentored junior Unity engineers, established standard Git branching protocols, enforced code reviews, and optimized asset pipelines to maintain high performance across mobile and headset targets.

SELECTED FEATURED PROJECTS

- **Trail Explorer v2 (U.S. Government):** Handled bug fixes for v1 and fully engineered v2 from scratch—building an outdoor educational AR platform with bilingual localization (EN/ES), accessibility subtitles, marker/markerless tracking, and GPS trail pins.
- **HajjMetaverse (Saudi Arabia Government):** Built scalable backend architecture, avatar customization systems, and UI flows for a large-scale 3D cultural guide.
- **VirtuEstate (Meta Quest 3):** Developed full VR real estate showcase software using VR Interaction Toolkit, reducing client site visits while preserving interactive property walkthroughs.
- **Gaussian Splat VR & AnatomyLens VR:** Pioneer implementation of volumetric point-cloud rendering in Quest 3 passthrough, supporting interactive layer isolation for medical learning.
- **FootHub (iOS LiDAR):** Integrated iOS LiDAR scanning pipelines to capture physical feet and transmit optimized 3D assets directly to web e-commerce platforms.
- **DexiHunter & PokeXR:** Built production location-based AR platforms combining Mapbox, ARKit/ARCore surface detection, Web3 wallets, and real-time multiplayer features.

EDUCATION

Bachelor of Science in Computer Science (BSCS) | Gold Medalist

Lahore Garrison University | 2019 – 2023

- **Honors:** Awarded Gold Medal for academic excellence and top rank in the Computer Science department.
- **Focus:** Software Architecture, Computer Vision, Game Engine Architecture, 3D Graphics Processing.

LANGUAGES

- **English:** Professional Working Proficiency
- **Urdu:** Native

Portfolio: fareedtahir131.com | Available for Remote Engagements