

OM SACHIN AWADHOOT

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SUMMARY

Unity XR developer with 2+ years shipping cross-platform AR/VR/MR applications on Meta Quest, HoloLens, and Magic Leap for enterprise training and clinical use cases, including a 500+ screen aviation systems trainer and a mixed reality medical teleconsultation app for pre-surgical patient communication. Strong C# and OOP foundation, hands-on with the Meta XR SDK, OpenXR, XR Interaction Toolkit, ARCore, and Vuforia, with a track record of taking XR features from prototype through performance-tuned, production builds alongside artists, designers, and researchers.

SKILLS

XR SDKs & Platforms: AR Foundation, OpenXR, Vuforia Engine, XR Interaction Toolkit (XRI), MRTK3, Meta XR SDK, Meta Quest 2/3/Pro, HoloLens 1

Programming Languages: C#, Java, Python, JavaScript, SQL

Unity & Real-Time 3D: Unity, TextMesh Pro, DOTween, Scriptable Objects, Modular Prefab Architecture, 3D Scene Design & Asset Management, Materials & Lighting, Real-Time Performance Optimization, Memory Management.

Tools & Data: Git, Android Studio, Blender, Firebase

EXPERIENCE

Research Intern | Human-Computer Interaction Lab, Indian Institute of Information Technology Sri City, Andhra Pradesh May 2026 - July 2026

- Investigated **novel spatial interaction paradigms** under **Dr. Himangshu Sarma**, positioning patient-initiated, **asynchronous spatial interaction framework** as a complementary extension to existing doctor-led, synchronous VR patient-education approaches.
- Conducted a mixed-methods usability pilot study (**N=14 students standing in for patients**) evaluating the Meta Quest 3 patient-facing application using SUS, a NASA-TLX-based workload measure, UEQ-S, and comfort screening, informing a final study targeting submission to IEEE VR / ACM CHI.
- Evaluated the generalizability of the current synthetic-imaging pipeline with PI's guidance, scoping a dedicated tumor/lesion-detection module as a decoupled research extension to strengthen robustness across patient cases.

Unity Developer | Vighnesh Inc., Mumbai Jun. 2024 - Apr. 2026

- Engineered a 2D interactive Airbus A320 MCDU simulation in Unity (URP), developing a C# state management system handling 500+ screens and 20+ modular ATA training modules.
- Optimized real-time 3D lighting, materials, and scene hierarchies for Meta Quest 2/Pro and HoloLens 1, utilizing CPU/GPU profiling and texture compression to maintain target frame rates.
- Integrated Firebase cloud databases for real-time simulation state management, aligning software logic with aviation engineering requirements and DRM data constraints.

Software Development Intern | Vighnesh Inc., Mumbai Mar. 2023 - Jan. 2024

- Optimized legacy Unity XR applications for Meta Quest 2/Pro and HoloLens 1 via GPU/CPU profiling, texture compression, and draw call reduction; conducted R&D on Magic Leap 1 for device-specific immersive experience development.
- Engineered interactive UI systems for 2+ VR training applications, collaborating with designers to ensure scene aesthetics and UX met high visual quality standards.

PROJECTS

MRConsultation: Asymmetric Mixed Reality Teleconsultation System | Unity 6, C#, Meta XR SDK, Python, REST API May 2026

- Architected an asymmetric teleconsultation system pairing a native Meta Quest 3 mixed reality app for patients with a projected React Three Fiber web portal for medical specialists, synced via a planned Firestore REST API designed for future cross-platform compatibility.
- Built a medical imaging-to-3D pipeline using NVIDIA's NV-Generate-CTMR (MAISI-v2) diffusion model, generating realistic organ digital twins from **diffusion-synthesized** CT imaging scans, with Blender-based decimation and Quadriflow remeshing optimized for real-time Quest 3 rendering.
- Implemented an interactive spatial annotation engine in Unity that captures patient hand-tracking inputs, anchoring text notes and recorded voice files to mesh vertices via a relative local transform schema for medical specialist review.

Homewise Vision: Architecture Visualization using AR Technology | [GitHub](#) | [Figma](#) | Unity, Vuforia Engine, C# Mar. 2024

- Built and developed an AR application in Unity3D that transforms 2D construction blueprints into interactive 3D models, managing the full asset pipeline including model import, material configuration, and scene layout for real-world scale visualization.
- Engineered cost estimation logic handling 5+ configurable parameters (slabs, carpet area, location); delivered a measurable impact on user productivity and financial decision-making accuracy.

EDUCATION

G H Raisoni College of Engineering Sep. 2024 - Expected Jun. 2027
B.Tech in Information Technology - 8.3 CGPA | Nagpur, India

Zagdu Singh Charitable Trust's Thakur Polytechnic Oct. 2021 - Jun. 2024
Diploma in Computer Engineering - 87.66% | Mumbai, India

PUBLICATIONS

Rane, V., Awadhoot, O., Gajare, B., Jain, K., & More, P. (2024). [AR Application: Homewise Vision. IRJET](#), 11(2), 11–18.

LEADERSHIP EXPERIENCE

Chairperson | GHRCE ACM Student Chapter Aug. 2025 - Present
Nagpur, India

- Founded and chartered the GHRCE ACM Student Chapter, recruiting and retaining a 25+ member team through software engineering workshops, hackathons, and research events that build industry-relevant skills.