

AMAN SAHU

SENIOR UNITY ARCHITECT | XR SYSTEMS SPECIALIST

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PROFESSIONAL SUMMARY

Senior Unity Architect with 10 years specializing in scalable XR systems architecture, currently leading technical decisions at Siemens Energy with 100% architecture authority.

- Delivered €200K+ annual operational savings through data-driven VR training framework
- Built high-scale applications reaching 11M+ downloads with 1M+ monthly active users
- Expert in Hexagonal Architecture, Event-Driven Design, and Domain-Driven patterns
- Proven track record: 90%+ unit test coverage, zero production failures, 90 FPS sustained

OPEN TO GLOBAL OPPORTUNITIES

KEY ACHIEVEMENTS

- €200K+ Annual savings through no-code VR training framework
- 11M+ Total downloads across consumer and industrial applications
- 95% Faster deployment (6 weeks → 3 days) via data-driven architecture
- 90 FPS Sustained performance on Meta Quest 3 (zero-allocation patterns)
- Zero Production failures across 18 months (90%+ test coverage)

PROFESSIONAL EXPERIENCE

SIEMENS ENERGY — Lead Unity Architect & XR Technical Lead

Jul 2023 – Present

100% Technical Ownership | Industrial XR Systems

VR TRAINING FRAMEWORK: €200K+ ANNUAL SAVINGS

- Architected data-driven no-code VR training framework enabling non-technical trainers to create modules independently through visual editor
- Designed using Hexagonal Architecture with pure C# domain layer (zero Unity dependencies) enabling engine-agnostic business logic and 90%+ unit test coverage
- Implemented Parallel Action Engine with composable action blocks allowing trainers to create complex scenarios without coding
- BUSINESS IMPACT:** Deployment time reduced 95% (6 weeks → 3 days), eliminated 70% developer dependency, €200K+ recurring annual savings
- TECHNICAL METRICS:** 90%+ unit test coverage, zero production failures (18 months), 85% faster testing (2 weeks → 3 days), 12 critical bugs caught pre-production

EVA AI SHOWROOM + FACTORY DIGITAL TWIN: 40% SALES CYCLE REDUCTION

- Built AI-powered voice-controlled showroom coordinating 6 synchronized displays across 2 networked PCs for high-stakes client demonstrations
- Evolved system into factory Digital Twin with live IoT sensor integration, real-time data visualization, and GPT-4 powered multilingual voice commands
- Implemented master-slave architecture with dual communication channels (real-time + REST API polling) achieving 95% auto-reconnect rate during network failures
- PHASE 1 IMPACT:** Zero demo failures (6 months weekly demos), 95% voice recognition accuracy (3 languages), 70% faster debugging
- PHASE 2 IMPACT:** 40% reduced sales cycle (remote demos), 90 FPS on Quest 3 (1M+ polygons), <100ms sensor-to-visualization latency

ARCHITECTURE & LEADERSHIP

- Established architecture standards across 5+ industrial XR projects emphasizing SOLID principles, Dependency Inversion, and Clean Architecture patterns
- Led platform evaluation for Magic Leap 2, Apple Vision Pro, WebXR, and Meta Quest Pro with quantitative feasibility reports enabling data-driven decisions
- Mentored 3 junior developers on design patterns (State Machine, Command, Observer, Factory), increasing team velocity by 30%

NAGARRO SOFTWARE — Software Development Engineer II

Jul 2021 – Jul 2023

Multiplayer Systems | Performance Optimization

- RUMMYSTARS MULTIPLAYER SYSTEM:** Contributed to multiplayer card game achieving 5M+ downloads and 1M+ MAU. Implemented card game logic (shuffling, dealing, validation) with server-side anti-cheat.

- **OPTIMIZATION:** Reduced draw calls by 40% via static batching, cut GC spikes by 80% via object pooling. Achieved 60 FPS on low-end Android devices.
- **MOBILE VR/AR:** Reduced memory usage by 25% via texture atlasing and mesh optimization. Performed Unity Profiler deep dives and Frame Debugger analysis.

MERKUR GAMING INDIA — Software Engineer I

Mar 2020 – Jul 2021

C++ Game Development / Performance Optimization

- Developed slot game mechanics using C++ and proprietary frameworks. Reduced load times by 30% through CPU/GPU profiling (Visual Studio, Intel VTune), asset preloading, and texture streaming.
- Optimized graphics rendering pipeline using DirectX 11: dynamic batching, Z-sorting, texture atlasing.

EARLY CAREER — XR Developer & Gaming Team Lead

Jun 2016 – Aug 2020

- Led gaming department managing team of 4 developers across 3 concurrent projects.
- Designed custom networking architecture achieving 40% latency improvement through interest management and delta compression.
- Developed early VR/AR prototypes using Google Cardboard, Gear VR, and ARCore for industrial applications.

TECHNICAL EXPERTISE

Architecture: Hexagonal, Event-Driven, DDD, CQRS, Clean Architecture, MVVM, Ports & Adapters.

Technologies: Unity3D (10+ yrs), C# (Expert), Meta Quest 2/3, HoloLens 2, Magic Leap 2, WebXR.

Cloud/AI: AWS (S3, Lambda, SageMaker, Amplify), GPT-4 API, REST APIs, AWS Transcribe/Polly.

Optimization: Zero-Allocation Patterns, 90 FPS Mobile VR, GC Optimization, LOD Systems.

Multiplayer: Custom Networking, Client-Side Prediction, Server Reconciliation, Anti-Cheat.

EDUCATION

Bachelor of Technology — Computer Science & Engineering

2012–2016

Skyline Institute of Engineering & Technology (SIET)