

PROFESSIONAL PROFILE

Accomplished and results-driven **Senior Unity 3D Developer** and **Interactive Systems Engineer** with **6+ years of commercial software production experience** creating high-performance games, interactive 3D simulations, AR/VR experiences, and custom Unity Editor tools. Holds a **Master of Science (M.Sc.) in Computer Science**. Demonstrated track record delivering flagship commercial products: engineered(as a team member) a PC survival roguelite targeting Steam, built projects for installations at GITEK Global, developed synchronized multi-screen IoT installations in Oman and UAE, published custom tools on the Unity Asset Store, and delivered commercial 3D WebGL car configurators for Toyota ALJ.

TECHNICAL COMPETENCIES

Game Engines

Unity Engine (URP, HDRP, Built-in Render Pipeline), WebGL.

XR, Vision & AI Integration(Unity Based Development)

Augmented Reality (AR Foundation, ARKit, ARCore, WebAR), Virtual Reality (OpenXR), Real-time Computer Vision & Face Capture.

Hardware, IoT & Microcontrollers (Standalone and Unity Based)

Arduino / Microcontroller Integration, Bi-directional Serial Protocols, Sensor & Actuator Interfacing.

Profiling, Optimization

Unity Profiler (CPU/GPU/Memory), Draw Call & GC Allocation Optimization, SRP Batch, Git / GitHub, Steamworks SDK, Google Play Console.

PROFESSIONAL WORK EXPERIENCE

(Selected Works)

Senior Unity Developer / Programmer • SECTOR4 INTERACTIVE

Jul 2019 — Present | Kochi, Kerala

Lead Unity script programmer and interactive systems architect responsible for end-to-end engineering of commercial games, AR/VR applications, enterprise hardware-software installations, and published developer tools.

- PC Survival Roguelite Development (Steam):** Engineered core mechanics, procedural feed algorithmic simulation, state managers, and game-breaking perk trees for *Rotted: A Brain Rot Simulator*. Optimized memory footprint and frame budgeting to sustain rock-solid 60+ FPS on PC.
- Interactive AI Installation (GITEK Global):** Architected *Captain Climate*, an AI-powered interactive booth featuring real-time face tracking and texture projection mapping visitors onto high-fidelity 3D superhero models with sub-200ms latency and 60 FPS playback.
- Hardware-Interfaced STEM Puzzle Game (Google Play):** Developed *QU Electronics Puzzle*, combining complex in-game electronic circuit logic simulation with custom bi-directional serial communication to physical Arduino microcontrollers.
- Commercial 3D Configurator Engine (Asset Store):** Authored and published *KitShift Car Configurator*, a comprehensive Unity plugin featuring real-time modular vehicle part swapping, PBR material layering, cinematic camera orbital rigs, and showroom lighting presets.
- Enterprise Multi-Display Sync Installations:** Engineered synchronized 6-display visual application for Esyasoftware's Proseed Hub, integrating interactive touch controls, physical 3D printed city models, and dynamic energy flow representations.
- IoT Gamified Clean Energy Simulation (NAMA Power, Oman):** Built dual-pedal interactive kinetic energy competition connecting physical pedal generators via Arduino Uno to dual-screen synchronized Unity simulations in real-time.
- Brand WebAR & WebGL Campaigns (Toyota ALJ):** Partnered with Ortmor Agency to deliver high-visibility web campaigns: the *Toyota Raize 3D WebGL Configurator* (contest resulting in 8 real cars wrapped) and marker-based *Toyota WebAR Treasure Hunt* with live leaderboards.
- Custom Unity Editor Utilities:** Designed and published *PlayerPrefs Editor & Manager* on the Unity Asset Store, creating visual inspection, search, batch-editing, and encryption utilities for game developers worldwide.

PRIOR PROFESSIONAL EXPERIENCE

Network Administrator & Systems Engineer • **Multitech Broadband**

May 2017 — Mar 2019 | Thrissur, Kerala

NodeJS Developer & Backend Engineer • **Metacode**

Jun 2016 — Apr 2017 | Kochi, Kerala

SELECTED KEY COMMERCIAL PROJECTS & DEPLOYMENTS

Rotted: A Brain Rot Simulator

Steam / PC

High-stress survival roguelite where players swipe an algorithmic feed, stack synergistic perks, and manage anxiety, hunger, and chaos stats before brain rot takes over.

Unity • C# • Game Architecture • Steamworks

Captain Climate AI Installation

GITEK Global

Interactive AI exhibition booth featuring real-time computer vision face capture mapped onto 3D character avatars with <200ms latency and 60 FPS rendering.

Unity • Computer Vision • Shaders • Live AI

KitShift Car Configurator

Unity Asset Store

Published 3D vehicle customization plugin with dynamic paint, wheel swapping, turntable cameras, and custom inspector editor integration for game studios.

Unity • Editor Tooling • PBR Shaders • C#

QU Electronics Puzzle

Google Play & Hardware

STEM physics and circuit simulation mobile puzzle game with bi-directional serial communication interfacing Unity runtime with physical Arduino circuits.

Android • Arduino • Serial Comm • Circuit Sim

Toyota Raize 3D Configurator

Toyota ALJ / WebGL

Interactive 3D WebGL car customizer for nationwide design campaign. Contestants created custom vinyl wraps, culminating in 8 real vehicles produced.

WebGL • Three.js / Unity • Custom Shaders

Sustainability Visualizer

Esyssoft Proseed Hub

Multi-display exhibition installation spanning 6 synchronized screens, interactive touch stations, and illuminated 3D printed city structures.

Multi-Display • Network Sync • Interactive Kiosks

Pedal-Powered Energy Flow

NAMA Power (Oman)

Competitive gamified kinetic energy installation interfacing twin pedal generators via Arduino microcontrollers to dual-screen clean energy simulations.

IoT • Arduino Uno • Kinetic Simulation

PlayerPrefs Editor & Manager

Unity Asset Store

Published Unity Editor utility providing visual management, cryptographic key protection, search, deletion, and cross-platform export of player settings.

Unity Editor Scripting • C# • Developer Tools

EDUCATION & ACADEMIC FOUNDATION

Master of Science (M.Sc.) in Computer Science

Advanced Theoretical & Applied Computing Foundation

Rigorous postgraduate curriculum specializing in: Advanced Algorithms & Computational Complexity, Object-Oriented Software Engineering, Computer Graphics Mathematics & Linear Algebra, Distributed Systems, and Advanced Database Architectures.

Professional Credentials & Publishing

Verified Commercial Developer Track Record

- **Unity Asset Store Publisher:** Commercial plugins & editor tools
- **Google Play Console Developer:** Published mobile STEM puzzle game
- **Steamworks Registered Developer:** Commercial PC titles

ENGINEERING METHODOLOGIES & CORE STRENGTHS

- **Clean Architecture & Scalability:** Deep practitioner of modular C# script architectures, decoupling game systems via ScriptableObjects, event buses, and domain-specific state machines to guarantee testability and minimal technical debt.
- **Rigorous Performance Profiling:** Veteran in identifying CPU/GPU bottlenecks using Unity Profiler and Memory Profiler — adept at eliminating garbage collection allocations in update loops, reducing draw calls via SRP Batcher, and optimizing shader complexity.
- **Full-Spectrum Hardware & Software Bridge:** Rare technical versatility spanning pure computer science algorithms, real-time 3D graphics, network protocols, computer vision AI, and physical microcontroller/sensor hardware.
- **Cross-Functional Collaboration:** Extensive track record collaborating with international agencies, 3D artists, hardware fabricators, and stakeholders to deliver high-visibility commercial installations on aggressive production timelines.