Jayanth Ongole

Senior Simulation Software Engineer | Unity | Unreal Engine | C# | C++ | Real-Time Systems | Defence | Simulation | Game

Hyderabad, India | Email: ongolejayanth@gmail.com | GitHub: github.com/JayCode-bit | Portfolio: artstation.com/jayanth_ongole

Professional Profile

Simulation Software Engineer with 5+ years of experience developing real-time training and simulation systems across Defence and Railway domains. Specialized in Unity and Unreal Engine with strong expertise in C#, C++, distributed simulation architecture, and hardware-software integration. Experienced in building complete simulator ecosystems including instructor–trainee distributed systems, physics-driven environments, radar and electronic warfare simulation, embedded hardware modules, and automated evaluation/reporting platforms. Capable of delivering end-to-end simulation products including software, hardware integration, and 3D environment development. Open to opportunities in Simulation, Defence, Real-Time Systems, and Game Technologies.

Core Competencies

1. Unity3D, Unreal Engine (C++, Blueprint)
2. C#, C++, .NET, WPF
3. Simulation Systems Engineering
4. Real-Time Physics & Vehicle Simulation
5. Defence Simulation Systems
6. Radar Simulation, ECM, ECCM, Electronic Warfare Concepts
7. Distributed Simulation Architecture (Server, IIS, CGI Multi-node Systems)
8. Hardware-Software Integration, Embedded Systems, Arduino, Electronics
9. 3D Generalist (Modeling for Simulation), Autodesk Maya
10. System Design, SDLC, Performance Optimization, Real-Time Communication

Professional Experience

Senior Simulation Software Engineer — Digital Curve IT Solutions, Hyderabad | Nov 2022 – Present

1. Developed multiple large-scale Defence and Railway Training Simulators (confidential).
2. Built 2 Defence Driving Simulators and 2 Defence Firing Simulators for realistic training environments.
3. Worked on Defence Firing Simulator featuring Radar systems, ECM (Electronic Countermeasures), ECCM, and advanced radar functionalities.
4. Contributed to Defence Truck Driving Simulator using Unreal Engine and C++ for real-time vehicle and training simulation.

5. Designed distributed Instructor–Trainee architecture including Central Server, IIS (Instructor Station), and CGI (Multi Trainee Nodes).
6. Developed full training lifecycle systems including scenario generation, real-time performance tracking, evaluation, and automated reporting.
7. Integrated embedded hardware modules and electronics into real-time simulation systems.
8. Built scalable simulation communication and synchronization systems for multi-node training environments.

Key Simulation Projects

1. WAG9 Railway Driving Simulator — Developed 105 KM physics-based railway environment with realistic locomotive behaviour, instructor monitoring, and training analytics.
2. Station Master Simulator — Built interactive railway traffic control, scheduling, and real-time operational failure simulation system.
3. Missile Firing Simulator — Real-time defence training simulation including radar, ECM, ECCM, and electronic warfare response systems (confidential).
4. Missile + Gunner Integrated Firing Simulator — Multi-role coordinated firing training simulator (confidential).
5. Defence Truck Driving Simulators (x2) — Realistic vehicle training simulators with distributed architecture.
6. Axle Counter Detection System — Embedded railway track occupancy detection using Arduino and electronics.
7. Multi-Meter Servo Gauge System — Hardware gauge and servo controller system integrated with simulation software.

Education

Bachelor of Science — Computer Applications, Physics, Chemistry | Dr. B.R. Ambedkar Open University, Hyderabad (2025)

Certifications

1. Unity Junior Programmer
2. Foundational C# with Microsoft
3. C++ Essentials
4. Jira Fundamentals
5. 3D Modeling, VFX, Compositing