VLADIMIR MOLDOVANOV

Unity Developer (Tools & Graphics) | C++ 3D Rendering Engineer

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Executive Summary: Senior Graphics & Software Engineer with **15+ years** of commercial production leadership (20+ years total in 3D graphics and game development) and **12+ years in the Unity ecosystem**. Proven track record of architecting embedded C++/OpenGL ES 3D engines for flagship BMW, Daimler AMG, and Audi vehicles, alongside shipping commercial Unity Editor frameworks (*VM_Attributes*, *VM_Emoji*), custom shaders, and tool-driven game architectures.

• 12+ Yrs Unity / C# / Tools **• 9 Shipped OEM 3D Engines** **• 2 Published Asset Store Tools**

CORE TECHNICAL STACK & ENGINEERING COMPETENCIES

Unity & Editor Tooling	C#, Custom Inspectors & Property Drawers, Editor Windows, UI Toolkit & uGUI, Shader Graph, TextMeshPro, Reflection & Attribute Frameworks, Asset Pipelines, Performance Profiling, Asset Store Publishing
3D Graphics & Tech Art	OpenGL / OpenGL ES, GLSL / HLSL, Custom Render Pipelines, PBR Materials, glTF 2.0 Viewers & Mesh Editors, Real-Time VFX, Spatial 3D-to-2D UI Projection, Procedural Geometry, 3ds Max (MAXScript)
Core C++ & Automotive	Modern C++, Custom 3D Engine Architecture, Embedded Systems Optimization, Memory & Frame-Budget Management, Automotive HMI & 3D Navigation Systems, Qt / QML, Android Target Deployment
Leadership & Process	Technical Architecture, Rendering Team Leadership (10+ years), R&D Prototyping & PoC Delivery, Code Review, Mentoring, Cross-Functional Collaboration, Agile (Scrum / Kanban), Jira / Confluence

COMMERCIAL EXPERIENCE — AUTOMOTIVE & REAL-TIME 3D RENDERING

Senior Unity Developer, Technical Artist & 3D Graphics Expert — DXC Technology 2021 – Present

- **Daimler AMG Flagship Android Platform — Senior Unity Developer (Sole Contributor, PoC, Jul–Sep 2025):** Engineered a Unity-based 3D visual presentation for the core *AMG-Performance* system on target Android automotive hardware. Ported complex shaders and real-time VFX to Unity with zero visual fidelity loss; architected high-speed track telemetry visualization and driving-history data processing (**Unity, C#, Shader Graph, HLSL, Android**).
- **Daimler AMG Gen20x Production Platform — Technical Artist / 3D Rendering Engineer (Jan 2023 – Present):** Driving visual feature engineering and performance optimization for the proprietary 3D rendering engine across the flagship AMG fleet. Delivered real-time battery/charging energy-flow shaders with smooth state transitions, damper spring compression history graphs, speed-linked wheel motion blur and tire tracks, 3D-to-2D spatial UI anchoring, dynamic headlights, and audio-reactive wave visuals (**Custom 3D Engine, GLSL, Qt/QML**).
- **Hyundai Mobis 3D Ecosystem — Senior Graphics Expert (2021 – Dec 2022):** Recruited to evolve a proprietary **glTF 3D Viewer & Editor**. Elevated PBR rendering fidelity, eliminated critical shader artifacts, and implemented interactive 3D modeling and UV tools including centroid camera control, smoothing groups, face extrusion, edge chamfering, and a full UV vertex/rotation editor (**glTF, PBR, GLSL, Qt/QML, 3D Tooling**).

COMMERCIAL EXPERIENCE (CONTINUED) — ENGINE LEADERSHIP & GAME STUDIOS

3D Navigation Rendering Lead (2010–2021) & R&D Team Lead (2006–2007) — **Luxoft** 2006 – 2021

- **Department & Architecture Leadership (11 Years):** Led the 3D Navigation Rendering department, architecting, optimizing, and shipping **9 production 3D rendering engines** for resource-constrained embedded hardware across three Tier-1 German automakers (**C++, OpenGL / OpenGL ES, GLSL, Embedded Linux/QNX**).
- **Delivered Production OEM Programs:** Shipped **BMW** (*NBT* 2010, *NBT-EVO* 2013, *EntryNav* 2014, *MGU18* 2018, *MGU21* 2021), **Daimler** (*NTG5* 2016, *NTG6* 2018, *NTG7* 2020), and **Audi** (*MIB3* 2020), maintaining strict frame-time budgets, multi-resolution map/terrain rendering, and OEM certification standards.
- **BMW L6 Rear-Seat Entertainment R&D (2006–2007):** Managed an embedded R&D engineering team for 2 years, building a custom C++/OpenGL ES 3D engine and interactive passenger game prototypes (*The Young Magician*) on integrated automotive hardware.

Founder, Technical Director & Lead Engine Programmer — **Game Studio "SEMARGL"** 2005 – 2006

- **Commercial PC Game Production:** Founded the studio after securing a publishing contract with **Akella** via a custom C++/OpenGL Action-RPG pitch demo (2004). Directed full-scale development and custom 3D engine architecture for the commercial PC RPG **"Dark Tower Conspiracy"** (shipped in 2006 by Akella; localized and released in Germany by **Atari**).

UNITY COMMERCIAL TOOLING & INDEPENDENT GAME ARCHITECTURE (12+ YEARS)

PRODUCT / PROJECT	ROLE & TIMELINE	ARCHITECTURE, TECHNICAL SCOPE & PRODUCTION HIGHLIGHTS
VM_Attributes **Asset Store** | **Docs & Web**	**Creator & Architect** 2025 – 2026 **Published**	High-performance Unity Inspector extension framework featuring **80+ attributes across 13 categories** (Collections, Nested, Validators, Conditions, Localization, Grouping, Script-wide decorators) plus an interactive Editor Preview Window and live demo scene.
VM_Emoji **Asset Store** | **Docs & Web**	**Creator & Developer** 2026 **Published**	Published Unity Editor & UI extension integrating the **Unicode 17.0 / 16.0 emoji standard**, 264 flags, and 142 Dingbats for custom inspectors, debug logs, and TextMeshPro labels across Light and Dark Editor themes.
Kingdoms **Turn-Based Strategy**	**Lead Unity Architect** 2025 – Present	Architecting a tactical fantasy strategy game in Unity (Pre-Alpha Demo) powered by a custom data-driven Editor pipeline; serves as the live production proving ground for *VM_Attributes* and *VM_Emoji*.
Zombies & Gladiator **Unity 3D R&D Titles**	**Unity Developer** 2013 – 2019	Built a Playable Alpha 3D third-person shooter (*Zombies*, 2019) with custom Editor automation tools, and a 3D Action-RPG combat/asset framework (*Gladiator*, 2013) transitioning custom C++ pipelines to Unity C#.

EARLIER C++ ENGINE MILESTONES & ADDITIONAL INFORMATION

• **"Curse of Ancients" (2008, Team Lead & C++ Engine Developer):** Built a publisher-ready 3D Action-RPG vertical slice on a proprietary C++, OpenGL, and GLSL rendering engine with custom skeletal animation and environment pipelines.

• **Early Game Industry Foundation (2000–2003):** Co-founded a 3D Action-RPG studio in Kharkiv (C++ / DirectX, 2003); served as C++ Developer at **GSC Game World** (2002), engineering the initial *"Warlock"* strategy prototype later evolved into *Heroes of Annihilated Empires*; founded the *gamemaker.chat.ru* dev community and authored tutorials on tile rendering and A* pathfinding.

• **Languages & Interactive Portfolio: English:** Upper-Intermediate (B2) | **Ukrainian & Russian:** Native | **Full Video Showcases:** **vm-gamedev.com/profile.html**