

Slade R. Villena
<https://www.sladevillena.dev>
✉ slade@gunstar.tech
☎ US 1-469-810-1948

Software & Embedded Engineering
Game Design & Ludology
Veteran, Marine, Hacker

Professional Experience

Independent Game Developer (Austin, Texas, USA)

Game Engine Programmer (2008 - Present Day)

Currently developing a VR+PC esports title from the ground up. Engine integrations Quantum 3.0 clustered tournament nodes. 3D+2D animation and UI/UX. Shader programming and game AI design. Custom game engine development in OpenGL & Vulkan.

Gunstar Technologies LLC (Austin, Texas, USA)

Tactical Systems Engineer (2018 - Present Day)

Working on novel sensor modules, DJI drones + Auterion Skynode, interfacing drones with VR headsets (Meta Quest, Valve Index). Developing visual A.I. integration with pistols & rifles.

York Space Systems (Austin, Texas, USA)

Senior Software Engineer (2023 - 2025)

Developer for visualization of satellite mission operations. Working with the Simulation Test and Automation team coordinating HWIL+SWIL simulations for space vehicles and space sensors.

Auterion (remote-work) (Zurich, Switzerland & Moorpark, California, USA)

Senior Software Engineer : Auterion Mission Control (2020 - 2022)

QGroundControl, PX4, AMC, Skynode, Skynav & C++ Qt/QML development for Auterion open source drone control systems. Working with DoD, US Marine Corps and US Army projects involved in sUAS, SRR and MRR domains. MAVLink protocol programming & design.

Bohemia Interactive Simulations / TerraSim Inc (remote-work) (Pittsburgh, Pennsylvania, USA)

Software Engineer : VBS3/4/BlueIG + TerraTools (2020 - 2021)

C++ programming on world simulation software geared for military and federal clients. Working with software teams in TerraTools, VBS3, VBS4 and VBS Blue IG.

NASA Ames Research Center (Mountain View, California, USA)

Software Engineer : Multi-UAS Drone Control Systems (SEP 2015 - MAY 2017)

Main engineer for the SCORCH project. Created prototype systems for multi-UAS drone control and autonomous flight in ISR operations. Designed, debugged, and integrated simulation software into novel military hardware systems via joint NASA and US Army research. Custom GPU driver development in OpenGL.

United States Marine Corps (Alpha Battery, 1st Battalion, 12th Marine Regiment)

Active Duty : 2002 > 2006, Reserves : 2006 > 2009

Corporal of Marines : 0811 Artillery Cannon Crewman

Deployed to Okinawa, Japan, Thailand & Korean Peninsula.

Education

University of California, Santa Cruz, USA

Degree : Bachelors of Science, Computer Science (Game Engineering Track)

PlayStation3 Academic Program, under Sony Computer Entertainment of America

Technical Experience – Software & Computer Engineering

Primary Languages & Programming

- **C/C++** (20+ years): Advanced toolchain maintenance, cross-platform (gcc, clang, cmake, gradle, maven). **Rust** (4 years)
- **Lua** (15+ years): Embedded scripting and C++ bindings
- **GLSL** (15+ years): Shaders for OpenGL and OpenGL ES
- **C#, Java, Python, JavaScript, Go, Objective-C, TypeScript**
- **Shell Scripting**: Bash, PowerShell, WSL2

Specializations

- **Graphics Programming**:
 - OpenGL 3.3 Core, OpenGL ES, GLSL, WebGL, OpenSceneGraph
- **UX / UI Systems**:
 - SDL2, Qt/QML, FLTK, WPF, AntTweakBar, Dear ImGui Custom UI tools & scientific interfaces
- **Electronics, Embedded Systems**:
 - Arduino, Raspberry Pi, I2C, SPI, UART, GPIO, PCB assembly, clean-room protocol, sensor integration
- **Cross-Platform & Systems Programming**:
 - Windows, Linux, macOS, iOS, Android, PS SDK, Xbox, Meta Quest
 - CMake, Gradle, Android NDK/JNI, iOS bindings, kernel module experience
 - Programming experience in ROS/ROS2, RTOS
 - Working knowledge of MISRA and other safety-critical programming standards

Networking & AI

- **Network Programming and Web Domains** :
 - Multi-process TCP/UDP, simulation backends, Photon Quantum,
 - Data serialization (Google Protobuf), Web tech (HTML/CSS/JS/Node.js/Firebase/Azure/PlayFab)
- **AI & Control Systems**:
 - Multi-agent systems, pathfinding, swarms, collision avoidance
 - PID controllers (concurrent ML coursework) TensorFlow, PyTorch, generative art workflows

Game Engines & Tools & Devops :

- Custom Engines (20+ years), Unity, Unreal, Godot, GameMaker
- Plugin development & engine integration
- Oculus/Meta Quest (since 2018), HTC Vive, Hololens
- Simulators, eye-tracking UI, military-grade UI hardware
- VBS3/VBS4/Blue IG (5+ years with Bohemia Interactive R&D)
- Git, GitHub, GitLab, SVN, Mercurial, Google Playwright
- Docker, containerization, large open-source collaboration experience
- Test-driven development, SCRUM, JIRA, bug-tracking