

Rijan Koirala – Engine Programmer (Mid/Senior)

Email: rijankoirala26@gmail.com | **Phone:** +81 070 2421 4851

GitHub: github.com/pogoPotato | **LinkedIn:** linkedin.com/in/rijan-koirala-2282ab2a3

Portfolio: rijankoirala.com.np | **Studio:** stupastudio.com

Summary

Self-taught engine programmer with expertise in C++ and low-level systems for game engines. Experienced in designing and building **custom game engines, launchers, and high-performance systems**. Passionate about **memory management, ECS architecture, rendering pipelines, physics simulation, and scalable networking**. Looking to contribute to AAA open-world games with **performance-focused, engine-level solutions**.

Core Skills

Programming Languages: C++, Rust, Python, C#, GLSL

Engine / Tools: OpenGL, Unity, Unreal Engine, ECS architecture, Shader Programming, Scene Management

Systems / Low-Level: Memory management, Asset streaming, Physics simulation, Collision detection, LOD optimization, Modular shaders, Multithreading, Client-server networking

Other / Web: Django, Node.js, Flutter/Dart, Firebase

Creative Tools: Blender, Krita, Godot

Selected Projects

Stupa Engine – Custom OpenGL-based game engine (C++)

- Built ECS architecture managing multiple objects with physics interactions.
- Implemented modular shader system reducing GPU load and draw calls.
- Scene serialization via JSON, enabling fast save/load of complex 3D scenes.
- Physics integrated with Bullet (collision detection, gravity) with multiplayer extensibility.

Stupa Launcher – Game launcher with dynamic install/play/update system (C#)

- Cloud-based versioning and update management for games.
- Chunked downloads and server-side crash logging for stable player experience.
- Scalable backend architecture for multi-user deployment.

VCT (Version Control Tool) – Git-like tool with advanced branching (Rust)

- Handles isolated branches, merges non-conflicting changes automatically.
- Supports multi-language localization with conceptual conflict resolution.

Stupa Cooker – Secure file-processing and encryption tool (Python)

Other Projects (Optional):

- **Stupa Invoice** – Invoice generator (Python)
 - **FoodDistributionAustralia.com** – Full-stack Django site
 - **HappyTails** – Personal pet adoption website (Django/JS)
 - **Linkage** – Flutter social media app
-

Education

Yamanashi Gakuin University, Japan – Data Science (Current)

Experience

McDonald's (Japan) – Stocker & Kitchen Helper | Present

KUSAKO / Shindoya / KursSushi – Kitchen Helper / Sushi Maker | Previous

Achievements / Extras

- Participated in multiple game jams (Unity Anniversary Jam, etc.)
 - Contributed to open-source (Rust Coreutils – multilingual support)
 - Leadership in collaborative software and game development projects
-

Languages

English – Fluent | Nepali – Native | Japanese – Basic conversational