

Aspiring Game Developer with strong skills in UE5 and C++. Seeking entry-level roles in game development or interactive media.

## Education

<b>Gujarat, India</b>	<b>Uka Tarsadia University</b>	<b>2022-2026</b>
B.Tech. in Computer Science and Engineering.		
<b>Gujarat, India</b>	<b>Sanskar Bharti Vidhyalaya</b>	<b>2020-2022</b>
Higher Secondary Education (11th–12th), Science Stream		

## Projects

### The Gravity Flip

Role: Solo Developer | Platform: Windows

Itch.io: <https://klaplab-studios.itch.io/the-gravity-flip>

- Designed and developed a Side Scroller puzzle platformer game using Unreal Engine 5, focusing on intuitive touch and keyboard mechanics and minimalist visual aesthetics.
- Implemented gravity flipping gameplay, allowing players to dynamically flip the environment in real time to avoid obstacles and reach goal.
- Packaged and optimized Windows build for PC gameplay, with improved lighting, resolution settings
- Technologies: Unreal Engine 5, C++, Blueprint

### AuraRPG

Role: Solo Developer | Platform: Windows

Code: <https://github.com/Kalpu-24/Aura-RPG>

- Designed and implemented a fully modular, scalable top-down RPG game using Unreal Engine 5 and the Gameplay Ability System (GAS), combining both C++ and Blueprint scripting following best practices from AAA game architecture.
- Built robust gameplay systems like attributes, abilities, leveling mechanics, combat, UI, and AI, focusing on modularity and performance.
- Developed a complete character stat system, with primary attributes (Strength, Intelligence, Resilience, Vigor) and derived secondary stats (Armor, Block Chance, Crit Chance, Health Regen, etc.), using custom GAS AttributeSets and replication-aware gameplay effects.
- Pioneered offensive and passive spells, mana and health systems, cooldowns, and visual feedback through custom Niagara particle effects, floating combat text, and status effect indicators.
- Engineered an expandable spell tree and attribute upgrade menus, using MVVM architecture and Unreal's new ViewModel system, supporting keyboard input remapping for active abilities.
- Integrated enemy AI behavior using Behavior Trees, EQS (Environment Query System), and class-specific logic for melee, ranged, and magic users. Enemies could summon minions, cast spells, and react dynamically to combat events.
- Technologies: Unreal Engine 5, C++, Blueprint, Gameplay Ability System (GAS)

### SnakeWall

Role: Solo Developer | Platform: Android

PlayStore: <https://play.google.com/store/apps/details?id=kalp.snake.wall> • Code: <https://github.com/Kalpu-24/SnakeWall>

- Designed, developed, and published an innovative Android live wallpaper game that reimagines the classic Snake gameplay as an animated, interactive background.
- Created real-time canvas drawing and efficient state management to support continuous background gameplay without impacting system performance or battery life.
- Integrated customization features such as toggleable grid display, variable speeds and color presets.
- Ensured seamless interaction with the Android lifecycle (e.g., pause, resume, background/foreground states), delivering a glitch-free visual experience across various device resolutions and Android versions.
- Published on Google Play and GitHub, reaching 1.96k+ downloads (reaching 2000) and earning 22+ stars, demonstrating user engagement and developer interest.
- Technologies: Java, Android SDK, Canvas API, XML

## Certifications

### Udemy: Unreal Engine 5 - Gameplay Ability System – Top Down RPG 2025

Completed an in-depth course focused on implementing GAS architecture in Unreal Engine 5 using perfect mix of C++ and Blueprints

## Technical Skills

- Languages: C/C++, SQL, Blueprints, XML
- Tools: Unreal Engine 5, Niagara, Behavior Trees, EQS, Git, Gameplay Ability System (GAS), Canvas API, SQLite