# Nintendo explores AI technology for the upcoming Switch 2



Nintendo is reportedly advancing its development of the highly anticipated Switch 2 by exploring artificial intelligence (AI) based upscaling technology, according to an updated patent. This potential innovation seeks to enhance graphics quality while also improving energy efficiency, aiming to provide a significant upgrade for Nintendo enthusiasts and gamers alike.

The Switch 2 may incorporate advanced AI technology designed to elevate game visuals. The recently updated patent indicates that Nintendo plans to utilise Convolutional Neural Networks (CNNs) for intelligent image upscaling. This development implies that the console could enhance lower-resolution images to higher resolutions, such as upgrading visuals to 1080p, without demanding additional processing power. As a result, games could operate at lower internal resolutions, yet still offer crisp, high-quality visuals on display screens.

This technological advancement is not only expected to upgrade graphics but could also optimally enhance performance and battery life. By necessitating less computational power, the proposed AI upscaling feature promises to make the handheld device more energy-efficient, a critical consideration for the mobile gaming experience.

Additionally, the upscaling technology could significantly benefit backward compatibility for older games. Reports from My Nintendo News suggest that these games may display notably improved graphics on the Switch 2 without requiring developers to modify them extensively.

The patent hints at versatility in integrating the neural network, suggesting it could either be built directly into the Switch 2’s hardware, function via cloud-based systems, or store essential upscaling data on game cartridges. This efficient allocation of resources could facilitate a seamless experience for both developers and gamers.

Among the most intriguing functionalities is the AI’s capability to autonomously determine when upscaling is necessary. For titles featuring simple graphics, the system could even opt for downscaling to conserve battery power. This advanced feature could provide the Switch 2 with a competitive edge against rivals like the Steam Deck and ROG Ally, which currently do not offer similar technology.

Furthermore, the potential for reducing aliasing effects during upscaling may obviate the requirement for resource-intensive anti-aliasing techniques such as Temporal Anti-Aliasing (TAA), thus enabling smoother gameplay and increased system performance.

While this technology appears promising, it is essential to recognise that patents do not always imply actual implementation. Nevertheless, excitement is mounting as Nintendo has announced a direct presentation scheduled for April 2, 2025, where further details regarding the Switch 2 are expected to be unveiled. Gamers globally are keenly anticipating how much of this innovative technology will ultimately feature in the final product.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://www.gizchina.com/2025/03/17/nintendo-switch-2-ai-tech-reveal/> - This article supports the claim that Nintendo is developing AI-powered image enhancement for the Switch 2, which can upscale lower-resolution images to higher resolutions like 1080p, enhancing graphics quality without sacrificing performance.
* <https://www.nintendolife.com/news/2025/03/ai-upscaling-on-nintendo-switch-2-is-basically-real-thanks-to-updated-patent> - This article provides further details on Nintendo's proposed AI resolution upscaling solution for the Switch 2, including the ability to upscale 540p images to 1080p, which aligns with the potential for enhancing game visuals.
* <https://mynintendonews.com/2025/03/16/updated-switch-2-patent-showing-ai-resolution-upscaling/> - This article discusses the updated patent showing AI resolution upscaling for the Switch 2, which could enhance older games' graphics without extensive modifications, supporting the claim of improved backward compatibility.
* <https://www.gizchina.com/2025/03/17/nintendo-switch-2-ai-tech-reveal/> - The article also mentions the potential integration with technologies like Nvidia DLSS, which could further enhance the upscaling capabilities of the Switch 2, though it remains unclear if this will be implemented.
* <https://www.nintendolife.com/news/2025/03/ai-upscaling-on-nintendo-switch-2-is-basically-real-thanks-to-updated-patent> - This source indicates that Nintendo will likely reveal more details about the Switch 2, including its AI upscaling technology, during the upcoming Nintendo Direct presentation on April 2, 2025.