

The Role of Machine Learning in Enhancing Realism in Unreal Engine Games

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Abstract:

It is the work of incorporating ML into Unreal Engine 5 to bring more realism to virtual game environments, simulating specifically a wind turbine. This solution used ML algorithms to improve visual and mechanical aspects by offering real-time interactions. Simulation of the turbine that dynamically adapts to environmental conditions through the hybrid application of Blueprint scripting and C++. The results have shown that ML significantly enhances realistic gameplay features and will play a major role in future development regarding AI-driven game design.

Keywords:

Machine learning, Unreal Engine, Game development, Realism, Artificial Intelligence, Immersive experiences.