

NIGC Tech Alert



Agentic AI In Casino Operations

What is Agentic AI? Agentic Artificial Intelligence (AI) refers to autonomous systems that are capable of independent reasoning, goal setting, and executing multi-task workflows with minimal human involvement. AI agent systems consist of at least one generative AI model and scaffolding software that equips the model with tools to execute a range of discretionary actions (Regulations.gov). Unlike traditional AI, which simply responds to prompts, agentic systems possess “agency” to use tools and adapt to environmental changes to achieve more complex objectives (Domo.com). Agentic AI represents a paradigm shift from recent predictive models to independent systems. An AI Agent can be thought of as a “digital employee” with a brain (Moveworks.com).

Casinos can leverage these digital employees (Agentic AI) to oversee complex, real-time environments. For example, AI agents can monitor foot traffic via sensors and independently dispatch staff to high-activity areas on the gaming floor or trigger maintenance for malfunctioning kiosks. Agents can be used in VIP Concierge automation by detecting a valued customer’s arrival, book their preferred suite, and update their loyalty profile without human intervention. Another way agents can be used is for real-time risk mitigation. Systems can monitor sportsbook lines and autonomously “freeze” betting if they detect suspicious player betting patterns. In terms of employee workforce optimization, agents can autonomously rewrite worker schedules in real-time based on unexpected surges in floor traffic or call-offs.

Of course, with the continuous evolution of AI, there are vulnerabilities, threats and risks using agentic AI. NIST has increasingly focused on the unique “identity and hijacking” risks of these autonomous actors. A 2026 NIST Request for Information warns that agentic systems “may be susceptible to backdoor attacks, and other exploits,” particularly those creating “persistent changes” outside of the system itself (NIST.gov). Below is a top three strategic analysis of agentic AI in the casino gaming environment:

Advantages	Disadvantages
Operational Speed: Executes defensive actions in milliseconds.	Accountability Gaps: Difficulty in auditing “why” an autonomous financial error occurred.
24/7 Scalability: Manages thousands of unique player journeys simultaneously.	Security Surface: Agents can create “non-human identities” that can be exploited if over-privileged.
Adaptive Problem Solving: Navigates changing odds or technical glitches without human assistance.	Algorithmic Bias: Autonomous agents may inadvertently favor or exclude specific player demographics

NIST provides an excellent resource intended to help evaluators of AI systems better manage AI risks which could affect individuals, organizations, society, or the environment ([NIST.gov](https://nist.gov)).

Please view the NIST RFI for the Public to Help Better Secure AI Agents at
<https://federalregister.gov/d/2026-00206>

Please view the NIST AI Risk Management Framework publication at
<https://www.nist.gov/itl/ai-risk-management-framework>

Please see America’s AI Action Plan at
<https://www.whitehouse.gov/wp-content/uploads/2025/07/Americas-AI-Action-Plan.pdf>

January 2026

