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THE IMPACT OF AI AND VIRTUAL INFLUENCERS ON GAMBLING

LEE WILLOWS, KIRSTIE HEPBURN, PROFESSOR PAUL DOLAN SEPTEMBER 2025

Community Care Gaming

Background

Artificial intelligence (AI) is powering innovations in online gambling and marketing, thanks to its ability to assess user behaviour, personalise and target content, and automate consumer engagement. Online gambling includes many types of activities, such as internet sports betting, virtual casinos, and really all forms of gambling, and occurs in the legal and the illegal worlds. The Gambling Commission (UKGC) regulates gambling in the UK, and has well-defined regulations around advertising, age identification, and responsible gameplay. However, black market (or unregulated gambling) bypasses these regulations and presents higher risks to consumers.

This paper looks at the impact of AI on the developing area of influencer marketing in gambling and gaming in both legal and black markets, and particularly the likely impact on Generation Alpha (Gen Alpha) consumers, who were born between 2010 and 2025.

AI: artificial influencing?

Influencer marketing is increasingly using AI tools such as machine learning (ML), natural language processing (NLP), and predictive analytics to better target, manage, and measure the success of any campaigns. These tools enable marketers to examine comprehensive datasets and determine behavioural patterns and predict the outcomes of a campaign. NLP extends this understanding further by analysing the content and sentiment of the text and predictive analytics, allowing brands to deploy their resources more efficiently. Operators use machine learning and behavioural analytics to customize their game suggestions, marketing deals, and user interfaces

The emergence of AI-generated influencers produced by algorithms, also known as virtual avatars, has led to new opportunities for advertising and marketing – but new challenges for regulators. Lil Miquela, a 19-year-old computer generated persona, was named by TIME as one of the most influential people on the planet and has more than 2.4 million followers on Instagram. With avatars, content can be customised and created entirely to meet the audience's needs, but without the challenge and costs of dealing with a human influencer. Avatars are scaleable; they are also consistent in tone and messaging.

The old methods of customer segmentation – along demographics such as age and income – have been replaced by psychological characteristics, behavioural, browsing and purchasing patterns. Furthermore, AI allows hyper-personalisation and "pushing" of content directly on to someone's social media feed, as well as monitoring their engagement in real time. Campaigns can be tweaked if they aren't working, visuals and captions adjusted, and calls-to-action revised.

Sentiment analysis tools report on how the campaign is being received and raise red flags when people respond adversely. Marketers have access to predictive analytics platforms such as IMAI to anticipate the effectiveness of campaigns pre-launch and assist in selecting influencers. High levels of customisation make it easier for brands to differentiate in their market, and ensure the highest possible ROI for any marketing spend.

Better profiling should reduce risk

While AI facilitates highly personalised and targeted communications, it enables users to identify – and therefore remove – those audience segments that are not relevant. In the case of gambling, this means operators can remove young and vulnerable users from their marketing efforts. AI can analyse user behaviour patterns and demographic data to automatically flag and block gambling advertisements from reaching accounts likely to belong to minors or vulnerable individuals. Machine learning algorithms can also monitor marketing content in real-time to identify messaging tactics specifically designed to exploit young or at-risk users. Examples of this include analysing text and visuals to identify urgency cues, messaging that downplays risk, and youth-oriented imagery.

UK Gambling Commission-regulated operators are increasingly using AI to profile risk and identify vulnerability, with the GC entering the final phase of a pilot scheme to build financial risk assessments. If the pilot is successful, these checks will help determine the players who might be gambling more than they can afford, facilitating early intervention by operators. It will also facilitate automated self-exclusion tools and safer gambling messaging.

But this assumes accuracy and transparency on behalf of the user and of the marketer. By using AI to maximise engagement with the customer, it presents a risk that vulnerable users could be pushed into harmful behaviour. If the influencer is a virtual avatar, it removes one additional layer of protection between influencer and audience, as well as raising concerns over levels of transparency, and whether young people can understand the difference. Young people (under-25s) have not fully developed impulse control and risk analysis. While AI can recognise patterns such as erratic betting, prolonged play, or sudden spikes in spending to trigger alerts or action, this relies on a robust regulatory environment with a commitment to player protection.

With AI power comes great responsibility

The delivery of highly personalised and targeted content is reliant on customer data and profiling, and operators are required to be transparent, have the necessary consents, and have robust data minimisation policies. GDPR Chapter III, Section 3, Article 22 specifically addresses AI-based decision-making. This protects subjects against material decisions being made on their behalf solely based on algorithms or AI profiling. There need to be human interventions to analyse AI profiling to protect users. Predictive analytics can determine when a user may be in jeopardy to churn, allowing the operator to trigger retention messaging and offers. While these features may increase the user's engagement, they also present ethical concerns of reinforcement cycles and behavioural nudging.

Algorithms can be flawed, including data-driven biases, design biases, and the resulting feedback loops – creating self-fulfilling prophesies. Skewed data may discriminate and exclude people unfairly due to their demographic characteristics. Meanwhile, risk models might enforce restrictions on players in particular geographical areas. To discourage such dangers, UKGC advises operators to audit their systems frequently, use explainable AI systems, and follow ethical frameworks. Given the further advances in AI, one of the core issues that is going to confront the UK regulated gambling market will be the balance between innovation and consumer protection.

Looking specifically at Gen Alpha (born 2010-2025), they have grown up with digital tools, and gamification has been used to promote education and creativity. Their cognitive growth and development has grown alongside technological advances, to the point where Siri and Alexa are as recognisable to them as any other words. Gen Alpha's taste, values, and aspirations are influenced by streamer culture and visible displays of consumption, and in-game purchases are second nature to them – but can they truly understand risk versus reward?

Custom gambling interfaces tailored by AI can target, exploit, and amplify cognitive vulnerabilities, such as impulsivity and reward sensitivity, coupled with immature risk appraisal. AI-enabled chatbots and social media influencers have the capability of generating emotional responses which may include sympathy and excitement. This ability can foster parasocial relationships, whereby users grow increasingly attached to the influencer.

Interfaces for gambling are increasingly gamified, using progression bars, unlocking achievements and other mechanisms tap into young people's gaming habits. For Gen Alpha, whose cognitive functions and impulse control are in the earlier stages of development, responding to such hyper-personalised and precisely calibrated stimuli can lead to compulsive engagement. In gambling contexts, the part of the brain known as the amygdala helps assess the potential risks and losses. When functioning normally, amygdala activation can serve as a "brake" system, discouraging risky gambling behaviour. When highly activated by the excitement of potential wins or the stress of losses, it can override the more considered decision-making processes in the prefrontal cortex.

The current regulatory landscape

Regulated forms of gambling, such as in the UK, have stringent requirements on how gambling is promoted. Compliance is automated with the use of AI tools, which analyse the language, formats and demographics to prevent prohibited language or images being used and responsible gambling messages are included. This removes the compliance risk and allows scalable compliant campaigns.

The use of influencer marketing in the UKGC-regulated ecosystem is associated with stringent advertising standards. The UK promoters of gambling services must ensure full compliance with the UK Code of Non-broadcast Advertising that requires transparent disclaimers, age restriction, and responsible communication usage. AI tools can assist with the compliance process by carrying out content audits, check the demographics of the audience, and spot uncompliant language or an absence of disclaimers. Influencer vetting can also be done by AI. Enforcement is, however, a problem. The emergence of AI-generated virtual avatars presents a challenge over jurisdiction and identifying organisations to hold to account.

The challenge presented by the black market

Black market gaming sites are not bound by the regulations of national authorities, with their inbuilt anonymity and opaque financial transactions providing additional risk. Such platforms often deploy VPNs and crypto payments to avoid geo-restrictions, and facilitate anonymous financial transactions. As a result, transactions cannot be easily tracked by regulators or jurisdictions enforced.

Social media and messaging apps such as Telegram, TikTok, and Discord are used to market unlicensed gambling services. These tools enable operators to reach the users with targeted messages and often in form of gamification and virally competitive challenges. Young users will be attracted to the high level of anonymity and fewer rules, and gamified interface of the black market platform. Video game-like avatars, in-game loot-box systems, and real-time interactions simulate the gaming world and create an atmosphere that blurs the line between gaming and gambling.

Just as AI helps regulated operators target their marketing better, AI also facilitates access to new customers for black market operators. Machine learning can identify behavioural trends, as well as identify micro-influencers to promote the product. AI can also create deep fake influencers, through deep learning and 3D graphic rendering, who are not bound by ethics or regulation.

AI bots can simulate user involvement by way of likes, comments, and shares to increase gambling content visibility. This gives a misleading impression of popularity and trustworthiness, particularly among younger users who value social recognition and community. Young people actively seek out online spaces for community building and social interaction, and 72% of those who play video games regularly engaged in multiplayer play, mostly with friends they met both offline and online. Online engagement triggers reward pathways in young people's brains, making likes and positive feedback neurologically rewarding.

These potentially manipulative technical tools can be used for harm by black market operators. Behavioural patterns of compulsive gamblers can be exploited as a result, including by issuing bonuses tied to chasing losses, as well as bonuses associated with specific times of the day. AI can hyper-personalise feedback and game mechanics, leading users to see gambling as skill-based or controllable, rather than clearly representing risk. This actively undermines informed choice, and increases the likelihood that users become victims of financial harm. Unregulated black market operators do not use tools to promote responsible gambling, such as deposit limits, cooling-off periods, or self-exclusion.

Regulatory black (market) hole

While regulators are cognisant of the challenges presented by black market operators, enforcement remains difficult for a number of reasons, not least the question of jurisdiction. The UKGC has very strict guidelines, but they remain hard to implement in cases of non-UK licensed operators. Black market operators often work from several locations and platforms at the same time, allowing for decentralised operations – and reducing the chance of detection.

Enforcement of advertising regulations becomes almost impossible as platforms can no longer differentiate between human and non-human actors. And while the UK regulations concerning influencer marketing necessitate the clear disclosure of paid collaborations, whether human or AI-generated influencers, this is not the case with other jurisdictions. Many brands still employ self-sustained methods of verification, which leads to non-compliance, as demonstrated by SwayID's compliance studies.

The enforcement of the EU AI Act, along with the GDPR, imposes stringent regulations on high-risk AI systems. Vendors on black markets rarely – if ever - execute algorithmic audits with explanatory AI outputs, leaving their participants to the mercy of opaque and biased decision-making. These regulatory gaps emphasise the need for responsive, multi-jurisdictional regulations that adapt to the realities of AI misuse in gambling.

What interventions could work?

The rapid advancement of gambling technology augmented by AI poses an immediate and multi-faceted problem for regulators. Effective regulatory interventions could include mandatory real-time transaction monitoring systems that flag suspicious payment patterns and require operators to verify customer identities through multiple authentication layers before allowing account funding. Additionally, implementing strict penalties for payment processors and advertising platforms that facilitate illegal gambling operations, combined with coordinated international enforcement efforts, could significantly reduce black market operators' ability to reach customers and process transactions across jurisdictions.

By the regulator:

- **Cross-platform oversight:** There is the need for machine learning, behaviour analytics, and synthetic media devising training to understand algorithm-based gambling and behaviour personalisation. Of particular importance is cross-platform monitoring to address the issue that gambling and gaming content circulates online.
- **Age verification technologies:** Google's attempts at self-reported data verification have shown promise at using AI to assess age. Such verification systems strengthen child protection compliance as they evaluate user behaviour, device, and contextual signals, to determine age and enhance adherence to child protection laws.
- **Preemptive oversight of gaming features:** The evidence shows that elements in gaming such as NFT loot boxes, betting on virtual skins, and wagering over crypto have the potemtial to be addictive, especially for a younger audience. These elements should be treated as gambling and regulated accordingly, with mandatory disclosure for the betting, pricing, and reward mechanisms.
- **Stricter disclosure.** The EU AI Act alongside state-specific regulations, including California's AI Transparency Act, mandates the AI-driven content to be labelled and disclosed, particularly in commercial and influencer transactions. Disclosure obligations extend to the influencer AI-generated post, video, and avatar; otherwise, they risk trust and integrity violations.
- **International collaboration and tech-responsive policy:** It is the responsibility of all regulators to coordinate their efforts internationally to align policies, regulations, and standards to close loopholes and bridge territorial gaps. Policies that adapt to changes in technology must be prioritised to ensure ethical oversight keeps pace with developments in AI.

By the operators and influencers:

- **Socially responsible campaigns:** Gambling campaigns should not be aimed at young people, with audience segmentation and content control in place to avoid this.
- **Partnership responsibilities:** AI-generated content does not exempt operators from disclosure obligations, so influencers who post, upload videos, or avatar content are obliged to indicate if their content uses AI.

- **Better safeguards:** Online platforms must utilise predictive analytics to flag, and act, on early warning signs of dependence and intervene appropriately. Customised analytics have proven to reduce relapses from self-excluded gamblers.
- **Smart infrastructure disclosure:** SwayID's Smart Disclosure Generator provides influencer's content with court-grade audit logs that are timestamped and issued in a structured manner.
- **Explainable AI coupled with human oversight:** AI systems, especially in the high-risk environment of gambling, need to give outputs that can be explained. Built-in human supervision is a requirement that should meet the human-in-the-loop criteria.

It is the responsibility of policymakers, operators and developers to work collaboratively to:

- Enforce age restrictions and other appropriate protective measures in games and gambling platforms.
- Enforce policy AI and influencer marketing regarding personalisation to ensure accountability.
- Teach Gen Alpha about emotion, risk, and digital literacy. However, research tells us that knowledge and education alone rarely relate to behaviour change. Cognitive biases distort how individuals process information, and emotional and social factors can provide powerful context.
- Create AI systems that prioritise the user's welfare and wellbeing instead of business growth and profit.

Future innovation

- The emergence of decentralised finance, immersive technologies, and AI personalisation are actively shaping the future of gambling. These trends offer innovative opportunities and risks.
- AI-Powered VR Casinos and Metaverse Gambling: Casinos in the metaverse are transforming the gambling landscape with the addition of VR and AR technologies, and AI powered avatars. Users can engage with 3D spaces, wager crypto, and interface with AI-powered dealers and influencers. Although these platforms provide unique experiences, they function in regions with sparse regulations.
- AI avatars are transforming influencer marketing with the shift towards token-based and decentralised systems. AI avatars can create tailored messages, and blockchain technology can provide transparency and enforceable contracts. These marketing strategies create a blend of entertainment, shopping, and gambling that calls for novel ethical and legislative guidelines.
- Web3 initiatives are increasingly adopting gamified governance, awarding participants with tokens. There is potential for this model to be adopted by gambling sites, consequently forming a hybrid space where players stake and wield influence.

Conclusion

AI has revolutionised influencer marketing in the gambling sector by allowing unparalleled levels of personalisation, scaling, and behavioural targeting. Through advanced analytics and real-time data processing, AI helps gambling operators analyse player behaviour, campaign performance, and traffic quality, allowing influencers to deliver highly targeted content that resonates with specific audience segments. This personalisation capability, powered by AI's analysis of player preferences, betting habits, and interaction history, has led to significantly higher engagement and conversion rates, making influencer partnerships more valuable and effective than traditional advertising approaches.

While lawful operators utilise AI to improve user safety and engagement, illegal market platforms exploit these same technologies to evade scrutiny and exploit at-risk users, particularly young people. This growing divide reveals a widening ethical gulf. Regulated innovation provides chances for responsible gambling, transparency, and user protection. In contrast, the unregulated spaces take advantage of AI to propagate gambling among the young generations, including using algorithms and virtial avatars to build connections with youngsters.

These issues can only be solved with collaboration across multiple fields. Regulators need to adapt policies to consider AI's rapidly evolving capabilities, its influence, and the need for cross-platform jurisdiction. Only through multi-stakeholder collaboration can we ensure that the gambling and gaming sectors continue to grow in a way that is ethical, safe, and transparent.

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Community Care Gaming, 124 City Road, London, EC1V 2NX
E: hello@communitycaregaming.org | T: 0203 488 5227 | www.communitycaregaming.org

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