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# How AI is reshaping game development from code to conversation

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AI isn't just leveling up games—it's rewriting the rules. From NPCs that think to bosses that learn your style, this is where code meets creativity, and ethics load faster than enemies. The future of gaming? Smarter, stranger, and deeply human

**A**rtificial Intelligence is no longer a sci-fi plot device in games—it's now a co-creator behind the scenes. From coding assistance to real-time storytelling, AI is rapidly reshaping how games are built, played, and experienced. But for all its promise, the integration of AI also poses complex questions about performance, balance, and ethics.

In this deep-dive, **Sudarshan Ranganathan, Head, iXie Gaming**, breaks down the real impact AI is having across the gaming pipeline—highlighting where it's helping, where caution is warranted, and what the road ahead looks like for studios and players alike.

## ▼ Rewriting the dev diary: AI as a tool, not a takeover

In the current landscape, AI serves more as a helpful co-pilot than a lead architect. According to Ranganathan, developers are using AI to streamline repetitive coding tasks or modular mechanics—allowing faster iteration and freeing up creative bandwidth. However, traditional coding practices still dominate, and full-scale AI coding is not yet the industry norm.

On the art side, AI is finding a niche in concept generation, especially for internal ideation and pitching. Designers use it to quickly visualize moods, characters, or environments during early discussions. But when it comes to production assets—such as 2D/3D models or animations—most studios remain cautious. The key concern? Intellectual property rights and artistic originality.

That said, Ranganathan hints at a potential turning point. The growing availability of open-source AI tools, like those from Deepseek, could nudge the industry toward broader adoption in asset creation.

## ▼ AI opponents that learn you: Behavior modeling and adaptive difficulty

Game AI has come a long way from the predictable enemies of early console eras. As Ranganathan outlines, titles like Half-Life and Unreal Tournament set early standards for adaptive enemies, but modern AI has taken things several steps further.

With today's improved processing



**SUDARSHAN RANGANATHAN**  
Head, iXie Gaming

capabilities—more powerful CPUs, GPUs, and memory—game AI can simulate human-like behavior with greater nuance. In fact, some AI systems now create near-multiplayer experiences even in single-player games.

A striking example, shared by Ranganathan, is NVIDIA ACE's AI-driven boss battle in MIRS, where enemies adapt in real time to a player's unique style. This kind of behavior modeling is blurring the line between PvE (Player vs Environment) and PvP (Player vs Player), unlocking new possibilities for immersive, unpredictable gameplay.

## ▼ From scripts to sentences: LLMs in narrative generation

The arrival of Large Language Models (LLMs) is setting the stage for a storytelling revolution. Ranganathan explains how these tools are being embedded into games to support real-time, dynamic conversations with NPCs (non-playable characters), moving far beyond the limitations of pre-written dialogue trees.

This capability is a game-changer, particularly for genres like RPGs and MMOs, where character depth and story branching are vital. LLMs can now modify dialogue, design side-quests, or evolve character arcs based on player actions and choices.

The result? Narratives that are no longer static but adaptive, reflecting the player's



journey and adding emotional weight to each interaction. It's personalization at scale—one that could redefine immersion itself.

### ▼ Performance vs fairness: The fine line in AI tuning

As AI becomes smarter, it also risks becoming too good.

Ranganathan points to a challenge that continues to surface: balance. AI systems with superhuman precision—like the OpenAI Dota 2 bot that beat world-class players—may be technically impressive, but they also risk alienating players. Games, after all, are meant to be challenging, not punishing.

"For AI to coexist with human players meaningfully," Ranganathan emphasizes, "it must incorporate natural limitations and allow for human error." That unpredictability—those moments of chaos, mistake, and recovery—are what make games memorable.

Without those human flaws, gameplay can become mechanical, even alienating. This is especially true in competitive gaming, where fairness and enjoyment are inseparable.

### ▼ Drawing ethical lines: AI in UGC and multiplayer spaces

Perhaps the most sensitive frontier of AI in gaming is its ethical application—especially in user-generated content (UGC) and multiplayer

environments. In these open-ended systems, the boundaries between player creativity and responsible usage can easily blur.

Ranganathan advocates for clear standards between developers and publishers regarding how AI should be used in-game—and more importantly, how it should not be used.

For instance, in freemium models, AI should never be deployed to subtly manipulate player spending behavior. Likewise, there must be guardrails around AI-generated content, including limits on volume, type, and player access.

To enforce such standards, Ranganathan proposes the idea of an independent regulatory body, akin to the ESRB or PEGI, which could audit and certify AI applications in games. While players will always explore edge cases, it's the developer's responsibility to protect the broader community by designing ethical systems.

### ▼ A game of balance, vision, and responsibility

AI is undeniably transforming the gaming industry—from how games are made, to how they react, and even how they speak. Yet as Ranganathan's insights reveal, the power of AI must be matched with precision, ethical awareness, and a deep understanding of what makes games truly enjoyable.

As studios experiment with AI's potential, the focus must remain on player experience over technological novelty. After all, games are about more than code—they're about connection, choice, and challenge.

And in that pursuit, AI is not just a tool—it's a teammate. One that, when used wisely, can help developers push the boundaries of creativity without crossing the line. ■

