**AI x Gaming**

**Week of February 3rd, 2024**

# **Top 3-5 Key News Items**

**Key News Item #1:** 94% of devs say AI is going to play “critical role” in QA’s future ([Link](https://www.pcgamesinsider.biz/news/74951/report-94-of-devs-say-ai-is-going-to-play-critical-role-in-qas-future/))

* According to [The State of Games QA](https://insights.modl.ai/state-of-games-qa-report) report from AI startup Modl.ai, 94% of the 300+ game devs interviewed expect AI to play a critical role in QA’s future. Modl does have some motivation to be biased however as they provide an AI service that is pitched to help QA.
* With QA often seen as one of the lowest rungs in the game dev ladder it’s not surprising that AI would be considered to help. It also doesn’t help that QA has been one of the more contentious parts of game dev labor with frequent pushes for unionization and outsourcing.
* Non-AI Automation is already an important part of QA, especially for AAA studios that have to manage a massive workflow pipeline. Unfortunately AAA games have also been demonstrating a significant QA problem the last few years with rushed, buggy releases. Constant expansions of content and multiplatform releases only increase the burden on QA to meet deadlines.
* While it’s likely most game studios will consider AI an opportunity for some budget cutting, it’s not realistic for it to provide the same accuracy of coverage a very experienced human QA employee provides. The QA budgets for many AAA titles easily runs in the $1-5M range and still leads to buggy releases. There will also have to be a transitory period where any issues identified by AI will need to be double checked, likely by a QA person, before making an issue official.
* The most realistic outcome is similar to what we are seeing with many jobs where AI potentially guts the entry level positions, leaving only the more senior QA members around to work alongside AI for now. It’s most likely that outsourced QA shops will be on the forefront of exploring the potential here.
* **Why does this matter to AI x Gaming:** As game studios look to slash budgets and deal with growing labor issues QA will be a prime target for exploration. As with most AI uses it will be far from perfect initially, but is likely to provide advantages over time.

**Key News Item #2:** Nvidia’s Jesse Clayton muses on the AI-powered future of gaming ([Link](https://www.laptopmag.com/laptops/gaming-laptops-pcs/nvidia-jesse-clayton-interview))

* In an interview with Jesse Clayton, Director of Product Management and Product Marketing for Windows AI, he explains how Nvidia sees AI helping to power games and says “These neural rendering innovations are laying the path for the future of gaming.”
* Nvidia has of course been critically important to non-gaming computing over the last few years thanks to both the blockchain and AI training. GPUs have been at the forefront of advanced computing for quite a while, outpacing CPUs, but sometimes being replaced by ASICs. Now there’s a push for new software and hardware innovations to drive the relationship between AI and games.
* The big new hardware switch has been towards augmenting GPUs with NPUs (Neural Processing Units). The main advantage of NPUs over GPUs is more efficient power usage for AI tasks. The electricity required for AI has been a pivotal issue for growth and the new chips help address the issue in games as well.
* Despite the constant reduction in costs for cloud AI services from OpenAI and others, games will eventually focus on leveraging local models instead for real-time generation in areas like generative dialog, leading towards higher utilization of NPUs to reduce power usage and free up the GPU for the graphics.
* The other major area of application for Nvidia is AI helping advance graphics themselves with things like DLSS that can improve frame generation for improved performance. It’s likely there will be other software/hardware breakthroughs and innovations from Nvidia as it now has to maintain its growing stock price amidst the AI hype.
* **Why does this matter to AI x Gaming:** Games and GPUs have had a symbiotic relationship of pushing each other forward subject to things like Moore’s law. With hardware chips getting harder and harder to improve and games still wanting more realism, it might now fall to AI to re-accelerate game performance not just in graphics but in AI through generative content and performance enhancements.

**Key News Item #3:** Roblox’s Stef Corazza: How AI is Empowering Video Game Creators ([Link](https://www.sequoiacap.com/podcast/training-data-stef-corazza/))

* Roblox Studio head Stef Corazza detailed how the company thinks about AI usage in an interview with Sequoia. Naturally much of it is centered on creators and community.
* Rather than the community seeing AI as an enemy to game development, creators provide training data in return for access to the AI tools. Roblox has publicly stated that there are already [millions of creators](https://corp.roblox.com/newsroom/2024/09/running-ai-inference-at-scale-in-the-hybrid-cloud) with access to these tools. This has helped not only build a positive relationship with creators over AI, but also a wealth of proprietary training data.
* The AI tools themselves are designed to primarily target tedious “dishwasher” tasks like coding and materials. Roblox wants to keep the tools somewhat limited to purposely constrain creativity while increasing access for the less technical.
* Stef also sees huge potential for graphics upgrades and custom visual styling using neural rendering techniques, prompts and reference images. He does also expect that genAI for games especially will need to become 3D-native rather than focusing on 2D imagery.
* Roblox also partnered up with Google, OpenAI and Discord to form a new non-profit organization to use AI and other technology to improve child safety online called [Robust Open Online Safety Tools (ROOST)](https://www.theverge.com/news/609367/roblox-discord-openai-google-roost-online-safety-tools). Roblox of course needs to show improvements in child safety more than others and AI can help moderation and safety scale better.
* **Why does this matter to AI x Gaming:** In many ways Roblox still represents a large portion of the future of gaming as its users grow up on the platform. Building a community accepted form of game development using AI and helping shape that usage will have a slow but strong impact on game development over time.

**Key News Item #4:** AI LLM games on Steam ([Link](https://store.steampowered.com/app/2880730/AI2U_With_You_Til_The_End/))

* Thanks to Steam’s rules on AI use disclosure we can start to see games hitting early access using LLMs for dialog systems rather than GenAI for art or other assets.
* [AI2U: With You 'Til The End](https://store.steampowered.com/app/2880730/AI2U_With_You_Til_The_End/), already in Early Access, is a game expansion of an AI Girlfriend simulator that has narrative, puzzles and multiple NPCs at different locations. The game uses LLMs and TTS tech for NPC dialogue and voice, and no AI generated art assets according to the policy required disclosure. The most interesting aspect here is that it has a Very Positive rating (317 reviews) despite two things working against it that usually generate negative reviews: Early Access and AI.
* The positive ratings here, which even include criticisms, show the interest for at least one specific kind of AI use in PC games. There are some issues with the unreliability of the dialog as you’d expect, but in general players so far seem fairly understanding of its Early Access nature, contrary to many Steam reviewers.
* [Millennium Whisper](https://store.steampowered.com/app/3156240/Millennium_Whisper/) is another game coming to early access on February 14th (Valentine’s Day), very appropriate for a dating sim of sorts that ironically is about a date on New Year’s Eve instead. The interesting thing about this game is its disclosure also mentions specifically running the LLM locally with no need to send data externally. It also specifically states that each character has their own model to have different personalities and types of reactions. Since it doesn’t hit Early Access for a few more days there are no reviews yet, but there’s a strong possibility of similar positive reviews.
* **Why does this matter to AI x Gaming:** Gamers have so far strongly rejected GenAI usage in games for most creative aspects, including narrative writing. Steam is also notoriously harsh on new tech it rejects such as blockchain, F2P and live service models, so acceptance of LLM dialogue systems is an encouraging exception. It’s worth noting however that genre definitely matters as dating or girlfriend sims are most likely to be accepted so far.

# **Other News Items**

* **Take-Two CEO believes AI will actually increase employment and productivity** ([Link](https://thegamepost.com/take-two-ceo-ai-kill-jobs/)): Strauss Zelnick, CEO of Take-Two made it clear that he believes AI, like many other previous digital tools, will simply improve game production and jobs.
* **AI and Games Conference** ([Link](http://www.youtube.com/@aiandgamesconference)): A recent AI and Games conference posted recordings of the talks to YouTube for free.
* **Krafton CEO discusses AI collaboration in gaming with OpenAI's Altman** (Link): Krafton CEO Kim Chang-han recently discussed collaboration with OpenAI with reporters as a followup to recent AI discussions around PubG.
* **Video game actors are still striking over AI protections. Here’s why** ([Link](https://www.polygon.com/news/519589/sag-aftra-video-game-actors-strike-ai-protections)): The ongoing strike has already had a visible impact on Destiny 2’s The Final Shape expansion, with many characters having no voice.
* **ByteDance’s AI-human avatar model: Omnihuman-1** ([Link](https://omnihuman-lab.github.io/)): Increasingly realistic AI generation of humans that allows for lots of tweaking.
* **Gemini can now do more complex data analysis in Google Sheets** ([Link](https://www.engadget.com/ai/gemini-can-now-do-more-complex-data-analysis-in-google-sheets-191218214.html)): AI Data analysis built into spreadsheets makes the life of a PM or game designer that much easier.

# **Content Worth Consuming**

* **The Future of Gaming with AI** ([Link](https://gtg.com.mt/ai-the-future-of-gaming-conversation-with-dr-ian-gauci/)):
  + In a podcast interview with Dr Ian Gauci on Decoding Gaming Laws Podcast, there were some interesting angles to look at AI in gaming. Rather than focus entirely on the obvious game development benefits, Dr Gauci also looked at some of the legal aspects.
  + Safety measures not from AI, but using AI were an interesting prospect, especially around gambling pattern analysis. It’s no secret that casinos use massive amounts of data and machine learning to try and hook players, so it’s good to see a consideration of how AI can help counter this effect by identifying and trying to curtail it.
  + They also discussed regulatory concerns including the AI Act from the perspective of innovation vs consumer protection. This is bound to be a continued area of struggle as we’ve seen with the growth of the blockchain, but AI is bound to be significantly more impactful and difficult to regulate. As with many legal and regulatory issues it helps tremendously to have open discussions with smart people to better inform any legal decisions, which are often made by those with less expertise.
* **AI is the future of video games whether we want it or not** ([Link](https://metro.co.uk/2025/02/09/ai-future-video-games-whether-want-not-readers-feature-22522909/)):
  + This piece takes a realistic assessment of the aspects of AI that are bound to push forward regardless of consumer rejection of AI. Some obvious ones that players will likely be comfortable with include improved AI behavior, graphics enhancements, gameplay adaptations, motion capture and smarter NPCs.
  + Some of the more controversial ideas include voice acting, dialogue, and dynamic character replacement. AI generated game commentary in sports games is probably less controversial, although it really depends on how it's implemented. The piece takes the stance that it will benefit actors through royalties and stock image type libraries, but as any artist on spotify knows those royalties are infinitesimally small.
* **a16z AI Voice Agents: 2025 Update** ([Link](https://a16z.com/ai-voice-agents-2025-update/)):
  + A16z put out a lengthy update on where AI voice agents stand. With many users of AI preferring voice conversations over text, especially on mobile, this has potential to be very impactful. The piece highlights a number of companies involved and verticals likely to be impacted. Voice models are going to benefit from the continued development of LLMs and world models, but there’s no reason not to develop quickly in parallel. AI has already proven adept at cloning users' voices, but the real difficulty will be in nailing down inflection and emotionality.
* **How Conversational AI will change entertainment and media** ([Link](https://elevenlabs.io/blog/how-conversational-ai-will-change-entertainment-and-media)):
  + In terms of AI voice quality, ElevenLabs still remains on top so of course they would put out a detailed article on how conversational AI will heavily impact entertainment and media. The piece includes detailed discussions of interactive media, sports AI usage including fan engagement, voice interactive streaming, text to speech advertising and engagement with journalism.
  + There’s no doubt that AI will impact media from both the GenAI side with AI generated ads, program content and possibly more. The interactive side of things is a bit more speculative as interactive television for example has been a dream for multiple generations and despite Netflix’s best effort hasn’t really hit home yet. As someone who often uses voice search on a Roku remote I can definitely see some potential for voice chat integration for content searches, recommendations and more.