**AI x Gaming**

**Week of December 9th, 2024**

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

**Key News Item #1:** Google ups its game with Gemini 2.0 ([Link](https://www.theverge.com/2024/12/11/24318530/google-gemini-2-0-understand-rules-video-games-genie))

* Google demonstrated the capabilities of Gemini 2.0 with the inclusion of a demo attempting to understand Supercell games Squad Busters, Clash of Clans and Hay Day during play.
* The demo showed the ability to read quests off the screen, suggest units to use for an attack based on quantities and unit types, as well as the ability to provide strategy and game meta information such as character tier lists. The demo contained some minor overlooked errors in text reading and game knowledge.
* The examples are somewhat superficial combinations of reading the screen as an image and information retrieval from the internet, but they suggest eventual real-time AI game coaching. It didn’t show much in the way of real-time visual capabilities as the players involved were mostly asking questions about static menu screens and non-visual queries.
* An interesting potential for the tech is game developers themselves using integrated or relayed images to an AI that helps players at a tutorial/coaching level, as well as some forms of technical or account support. This could prove worthwhile if it prevents lost or stuck players from churning. Squad Busters for example is looking at only 11-15% Day 2 retention according to data.ai estimates.
* Unfortunately this kind of technology will absolutely be used for cheating if it gets up to speed, especially when it's able to see and control the game from outside of the PC, Console or Mobile device making it near undetectable.
* **Why does this matter to AI x Gaming:** Mixing increasing visual comprehension of game contexts combined with knowledge of the specific game offers strong potential for multiple forms of assistance to game players, both good and bad.

**Key News Item #2:** Midjourney patches together game worlds ([Link](https://x.com/midjourney/status/1866964274347733070))

* Midjourney launched Patchwork, an AI multiplayer worldbuilding tool and infinite canvas mixing image gen with storytelling including characters as interconnected portals and “scraps”.
* One of the most difficult aspects of using generated images is maintaining consistency, so the new tool starts world creation out by providing images in the style you want to use across the world.
* Patchwork provides some different types of entities such as characters, factions, props, events and places along with the ability to then generate images of the descriptions provided. These scraps are linked together to help visually and logically flesh out the relationships of the world.
* Multiple users can create in the same world with the cursors visible similar to working in a group Miro board, making this a good tool for writers, designers and artists to leverage AI collaboratively.
* This tool will be most useful in the pre-production phase of game development for now, but it beats trying to collaborate using word docs and e-mails. It’s not hard to imagine some point in time when tools like this will be competing with [Articy draft](https://www.articy.com/en/), which no doubt is looking at [leveraging AI integration](https://www.articy.com/en/articydraft/feature-list/?v=7516fd43adaa#id10) further.
* **Why does this matter to AI x Gaming:** With game development struggling in general, using tools like Patchwork to improve pre-production and lowering early experimentation costs around content and design will help de-risk games and smooth out production.

**Key News Item 3:** Intel ditches delay with AI frame generation ([Link](https://www.pcgamer.com/hardware/graphics-cards/intel-researchers-create-a-method-for-ai-generating-frames-in-games-without-added-input-latency/))

* Intel researchers have developed a new method of using AI to extrapolate in between frames in games with less input latency than the normal method that requires holding frames back.
* This method isn’t perfect because any method for frame interpolation or extrapolation requires estimating rather than reacting perfectly to input, but this method removes the need for latency caused by artificial waiting. Cloud gaming also relies on input prediction or estimation to try and counter the reality of input latency.
* This system needing only access to the completed frames could provide a strong advantage to work at the driver level rather than game rendering pipeline, which could increase compatibility without the game needing to explicitly support it.
* This technology, referred to as G-buffer Free Frame Extrapolation (GFFE) is looking to compete with Nvidia's DLSS, AMD’s FSR and Intel’s own XeSS. Intel has managed to get GFFE down to a very fast 6.6 milliseconds to generate a 1080p frame without needing to introduce any input latency.
* **Why does this matter to AI x Gaming:** Using AI for predictive systems in games has a lot of potential to increase the feeling of responsiveness in areas where responsiveness will always have bottlenecks.

**Key News Item 4:** Sora testing unearths video game training ([Link](https://techcrunch.com/2024/12/11/it-sure-looks-like-openai-trained-sora-on-game-content-and-legal-experts-say-that-could-be-a-problem/))

* With OpenAI’s video generation tool Sora now more open to the public, users have started testing out generating video game imagery. Some tests have made it clear at least some video games were used in the notoriously opaque training data.
* OpenAI has strong filtering in place to try and protect against referencing copyrighted material in prompts, but generating something that looks extremely similar to Super Mario Bros by referring to an "Italian plumber game” makes it clear Sora has seen the game.
* There are other examples, but the risk for OpenAI here is further exposure of training on copyrighted materials, weakening its frequent battles with creatives over inclusion without permission.
* As competitors like Google’s Deepmind start offering more demonstrations of usage around game comprehension and creation, it becomes more likely OpenAI will be encouraged to train on even more game imagery and video.
* **Why does this matter to AI x Gaming:** It’s inevitable GenAI will be used in games at different levels and much like book authors have been fighting LLMs tooth and nail, video games may also end up in a similar position soon.

# **Other News Items**

* **Character.AI sued again over ‘harmful’ messages sent to teens** ([Link](https://www.businesswire.com/news/home/20241203844240/en/Game-Developers-Conference-Joins-The-AI-Summit-New-York-to-Further-NYC-Game-Development-and-Understanding-of-Generative-AI)): Helping highlight one of the big risks in using LLMs for roleplay style chatting for fun and games, Character.AI is running into issues with not having enough control over what it’s saying to kids.
* **China opens an antitrust investigation into Nvidia** ([Link](https://www.theverge.com/2024/12/9/24317016/nvidia-mellanox-antitrust-china-ai-chips)): Nvidia is under the microscope from the Chinese government over acquisitions like Mellanox at a time when AI, chips and tariffs are heating up between the US and China.
* **Devin - the AI software engineer is now generally available** ([Link](https://www.cognition.ai/blog/devin-generally-available?utm_source=bensbites&utm_medium=newsletter&utm_campaign=bb-digest-google-s-new-agents)): One of the more impressive AI coding tools is finally available to the public at the high price of $500/month, but has potential to replace junior level programmers.

# **Content Worth Consuming**

1. **In defense and absolute condemnation of AI: how AI has already affected “The Game Industry”** ([Link](https://www.nathalielawhead.com/candybox/in-defense-and-absolute-condemnation-of-ai-how-ai-has-already-affected-the-game-industry)): A run through some of the noteworthy impacts that AI has had on the game industry recently, touching especially on the effects for Itch.io.
2. **Using generative AI to analyze game reviews from players and press** ([Link](https://aws.amazon.com/blogs/gametech/using-generative-ai-to-analyze-game-reviews-from-players-and-press/)): A great tutorial from AWS that has a real practical application of using AI to analyze game reviews for both sentiment and issues game developers can act on.
3. **What can GenAI actually do well?** ([Link](https://maximilian-brandmaier.de/what-can-generative-ai-actually-do/)): A solid look at the areas GenAI works well, works poorly and just flat out stinks at.
4. **15 Times to use AI, and 5 Not to** ([Link](https://www.oneusefulthing.org/p/15-times-to-use-ai-and-5-not-to)): Some good thinking around where it logically and ethically makes sense to consider applying GenAI.