# How AI powers Candy Crush Saga’s 18,700 levels behind the scenes



As players navigate the intricate puzzles of Candy Crush Saga, unwittingly solving challenges across more than 18,700 levels, many might be surprised to discover that artificial intelligence (AI) is intricately woven into the game’s development fabric. The integration of AI not only enhances player engagement but also streamlines the massive undertaking required to keep such a vast game fresh and appealing.

King, the Swedish developer behind the beloved game, has been utilising AI to facilitate the creation and daily management of levels, particularly in ensuring that puzzles remain engaging for both new and returning players. Todd Green, general manager for the Candy Crush franchise, highlighted that AI allows developers to update older levels and create new ones more efficiently. The company claims that without AI's initial analysis and drafting capabilities, manually redesigning thousands of levels would be nearly impossible. This improvement maximises creativity by enabling designers to focus on crafting innovative puzzles while AI handles more routine adjustments.

Within the broader landscape of video game development, opinions on the role of AI are varied. Some developers view it as a valuable assistant that can perform mundane tasks, freeing up talent for more creative endeavors, while others express concern over its potential to disrupt traditional roles within the industry. The implications of AI in gaming have led to significant industry dialogues, evidenced by a recent strike by members of the Screen Actors Guild-American Federation of Television and Radio Artists, reflecting worries about job security in an era increasingly influenced by technology.

King's approach strategically targets two vital areas: the generation of new content and the revitalisation of older puzzles that might otherwise lose player interest. As Green explained, AI's role is primarily behind the scenes, enhancing the development “loop” rather than directly interfacing with players. This allows the company to test and fine-tune levels rapidly, given that the game does not lend itself easily to extensive player feedback on new content before launch.

Candy Crush was first introduced on Facebook in 2012 and has since evolved into a multifaceted gaming phenomenon, reflected in its latest releases, such as the recently launched 300th client version. In 2024, consumer spending on video gaming reached $51.3 billion in the United States, with mobile games accounting for a staggering 50 per cent of this market, a testament to the genre's sustained popularity. Analysts like Joost Van Dreunen assert that for a game of Candy Crush's age and user base, leveraging AI to generate content efficiently is not just practical; it’s vital to meeting the ever-increasing demand of its players.

Moreover, the collaboration between AI and human designers enhances overall gameplay quality. King employs AI tools for rigorous testing and quality assurance, including an automated testing bot known as BAIT, which can simulate user interactions to detect potential glitches or functionality issues. This capability not only improves responsiveness to quality concerns but also enables King to maintain a competitive edge in a rapidly evolving gaming market.

In summary, King’s integration of AI into Candy Crush Saga exemplifies how technology can enhance game development. By employing AI thoughtfully—mostly as a tool for internal efficiency rather than a replacement for human creativity—the company aims to keep the puzzle experience fresh and rewarding. Players can expect a game that evolves seamlessly over time, with challenges that are meticulously calibrated to provide an optimal experience, whether they’re seasoned veterans or new entrants to the colourful world of Candy Crush.

### Reference Map

1. Paragraphs 1, 2, 3, 4, 5, 6
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## Bibliography

1. <https://www.sentinelandenterprise.com/2025/05/12/candy-crush-ai-help/> - Please view link - unable to able to access data
2. <https://apnews.com/article/547254aaa06bf026df5b41458ac62dcc> - This article discusses how Candy Crush Saga utilizes artificial intelligence (AI) to enhance gameplay and manage its extensive library of over 18,700 levels. AI assists developers in creating and updating game boards, ensuring puzzles remain engaging and balanced for both new and returning players. This technology allows King's team to improve thousands of levels weekly, compared to only hundreds manually, by automating the drafting process. AI is used behind the scenes, not directly in players' gaming experience, with the goal of analyzing feedback and performance metrics like pass rates and reshuffle frequency to fine-tune user experience. While AI frees developers for more creative tasks, its broader use in the gaming industry has sparked debate, particularly concerning its potential impact on jobs, exemplified by the Screen Actors Guild's 2023 strike. Since its 2012 launch, Candy Crush has continued to innovate, recently releasing its 300th version. With mobile games accounting for half of the $51.3 billion U.S. gaming market in 2024, King's integration of AI reflects a strategic move to meet high player demand efficiently and sustain the game’s longevity.
3. <https://www.infoq.com/articles/candy-crush-qa-ai-saga/> - This article explores how King, the developer of Candy Crush Saga, employs artificial intelligence (AI) to enhance the quality assurance (QA) process. King has developed a QA bot named BAIT (Bot for AI Testing) that supports testers by automating tedious tasks and covering areas previously considered impractical to test manually. BAIT is designed to traverse through the game, taking screenshots of new screens, recognizing elements such as buttons and text strings, and clicking on them to detect functionality, crashes, and performance issues. This AI-powered approach has enabled King to scale up testing efforts, increase test coverage, and improve the overall quality of the game.
4. <https://aibusiness.com/ml/gaming-gets-smarter-insights-from-kings-head-of-ai> - This article provides insights into how King, the developer of Candy Crush Saga, integrates artificial intelligence (AI) into game development. The Head of AI at King discusses the use of AI in level generation, level tweaking, and playtesting. AI is utilized to analyze player data, generate new levels, and adjust existing ones to enhance player experience. The article highlights the collaborative efforts between AI and human designers to create engaging and challenging levels, ensuring that the game remains fresh and appealing to players over time.
5. <https://mobilegamer.biz/how-king-balances-human-and-ai-powered-design-in-candy-crush-saga/> - This article examines how King, the developer of Candy Crush Saga, balances human creativity with artificial intelligence (AI) in game design. The Director of AI Labs at King explains that AI is used as an assistive tool in the level creation process, providing insights into gameplay experience and helping designers iterate more efficiently. AI-powered playtesting bots evaluate levels before release, offering data on gameplay metrics such as difficulty and player engagement. This approach allows designers to focus on creative aspects while leveraging AI to enhance the quality and appeal of the game.
6. <https://schedule.gdconf.com/session/levelling-up-how-ais-transformative-role-in-automating-level-management-is-adding-business-value-in-candy-crush-saga/900208> - This session at the Game Developers Conference 2024 discusses how King, the developer of Candy Crush Saga, implements artificial intelligence (AI) to automate level management and add business value. The session covers the journey of bringing AI from research to product, focusing on AI's role in content automation production, including A/B testing and high-speed AI level testing. Attendees learn about the integration of AI in game development processes and its impact on business transformation within the gaming industry.
7. <https://www.digitaltrends.com/gaming/candy-crush-saga-ai-interview-gdc-2024/> - This article provides an interview with the Director of AI Labs at King, the developer of Candy Crush Saga, discussing the use of artificial intelligence (AI) in game development. The interview highlights how AI serves as an assistive tool in the level creation process, with AI solutions for playtesting and level tweaking. The playtesting model helps gain insights into the gameplay experience, and the AI tweaking system assists designers in iterating levels more efficiently. The article emphasizes the collaborative role of AI in enhancing the quality and appeal of the game.