AI art for game developers.

Turning your vision into visuals has never been easier. Learn how to generate AI art for game design.

Explore Adobe Firefly

What role can AI-generated art play in game design?

AI in games goes all the way back to checkers and chess programs of the 1950s. Today, nearly every video game contains some form of AI to simulate reality and create more realistic non-player characters (NPCs). In the next few years, AI for game programming could do a lot of the heavy lifting of world creation. Game AI might even play a role in developing characters and narratives.

One of the more recent developments of AI in gaming is the use of generative AI in game design. With AI generators that use machine learning models to produce imagery, game developers can enter a text prompt, or short description of the thing they want to see, and instantly create an image. The technology is so fast and versatile that game programmers can follow their ideas wherever they lead.

Before you start game programming, you can use AI to explore new ideas and multiple iterations. You can generate images for game environments and characters, create text effects for game titles, and use AI to try different color palettes and textures. In no time you'll be moving from possibilities to prototypes.

AI art for environments.

Before you have your game's characters, you need a place for them to exist. From the simplest side-scrolling game to the most complex open-world games, the setting is crucial to its success. Once you have a top-level map that gives you a sense of where and how players will move through the game, as well as a sense of how each level will work, you can use AI to help you figure out how it all will look.

Decide on your aesthetic.

Is your game world a sky kingdom of floating islands where archers mounted on giant eagles fight dragons? Or a pixelated post-apocalyptic scavenger hunt in the sewers of Manhattan? Or maybe it's a hyper-real office environment in which Gerald the intern must get from the kitchen to his boss's office without spilling his coffee.

Moodboard and storyboard with AI.

Once you have the vision, you can use Firefly-powered features like Text to Image to help others see it. Create landscapes and buildings for your game characters to inhabit. Adobe Firefly recognizes architectural movements and styles, so you can create anything from a Tudor village to a Brutalist office building, or a walled desert oasis to tents deep in the rainforest. Your interiors can be anything from an old magical library to a modern factory floor.

AI art for character exploration.

Whether you're designing main characters or NPCs, you can explore different

looks fast with detailed text prompts. In the Firefly web app, the more specific you can be, the better.

Start with style.

Every game has its own aesthetic. Whether the world you want to develop is fantastic, steampunk, sci-fi, or Western, you can add that to your prompt. In Firefly, you can make some style selections in the righthand panel. Add particular colors or concepts (like vibrant or muted).

Stretch your powers of description.

Is your character tall or short, old or young, human or animal (or animal-human hybrid)? What color are their eyes? What of their backstory might show up in their face? Wrinkles, scars, tattoos, or weaponry could all be part of their look. You may have to play with your prompts to get close to your vision, but the more specific you can be, the more AI can help.

Refine Your Prompts

You can use punctuation and other tools to adjust AI prompts. If the AI struggles to understand how your words should be grouped, try adding quotes around the words that go together. For example, "little girl adventurer in dirty, ragged clothes" standing on top of a "snow-covered mountain peak"

next to a "pink woolly mammoth" might work better than without any quotes.

Other refinements include noting elements you'd like to avoid, specifying the strength of your style, and giving guidance to the AI in terms of how closely you want it to attend to your prompt. For example, if you want to save blue tones for a different character, just type [avoid = blue] at the end of your prompt.
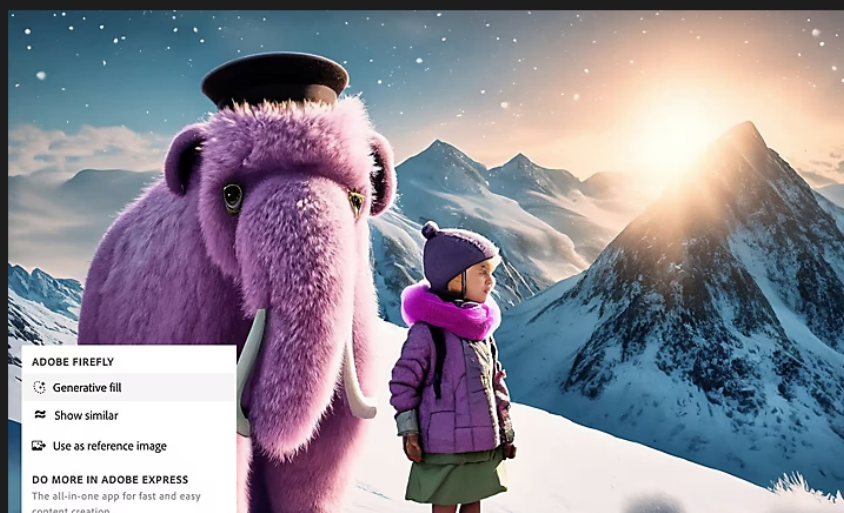
The AI can do subtlety as well. If you just want a hint of steampunk, you can adjust the style strength. Type [stylize = 20, 80], or another two numbers that add up to 100. Guidance, which is how much freedom you give the AI to play, can be a number between 0 and 25, such as [guidance = 5]. Lower numbers mean the AI has more room to ignore the prompt.

Text-to-image prompt: "little girl adventurer in dirty, ragged clothes" standing on top of a "snow-covered mountain peak" next to a "pink woolly mammoth"

Edit your AI-generated characters with Generative Fill.

After you've generated an image in Firefly, you can fix glitches and add or remove objects. Just click the Edit button on the top left of the image and select Generative Fill. To add a particular object like a weapon or other prop, select the area where you want to place it and then type your description of the object in the prompt field.

Stylize your titles with AI text effects.

AI can even help game programmers develop their game's title style. In Firefly, all you have to do to create [text effects](#) is type a short description of the effect you want into the prompt field and the word you want to stylize, then click Generate. (You can also select an effect from a list of styles.) If your game is about decorating donuts as fast you can before they pile up, "stacks of donuts" is a great prompt.

How to use AI-generated images commercially.

The legal issues surrounding [generative AI](#) can be intimidating for game developers, but Firefly's first generative AI model is designed to be commercially safe. Because it's trained on a dataset of Adobe Stock, along with openly licensed work and public domain content where copyright has expired, you can leverage your inspirational images in your actual game design without worrying about infringing on another creator's copyright.

With your imagination and Firefly, you can bring your characters and environments to life so you can share them with the world.

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The power of generative AI is coming to your favorite Adobe products.

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