

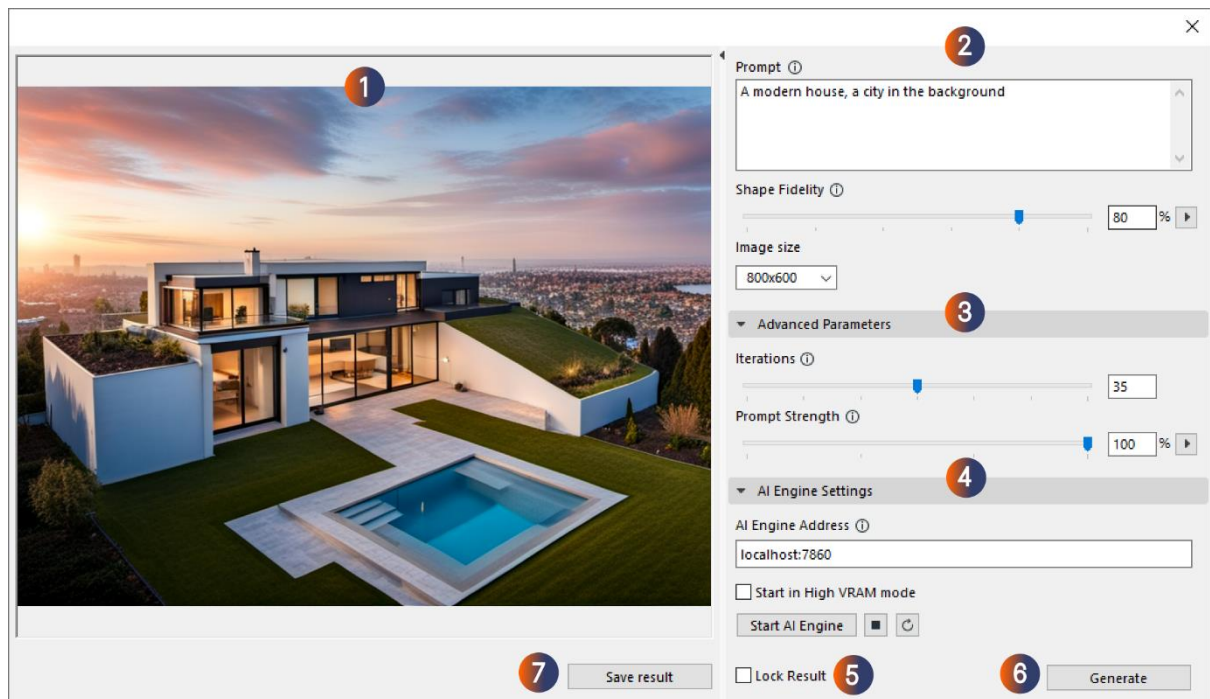
Welcome to AI Visualizer!

Transform Your Archicad models into inspiring concepts!

With Stable Diffusion technology integrated into Archicad, AI Visualizer can generate photorealistic images or artistic drawings from simple mass models or more complex models. You can also customize your concepts with prompts, adjust shape fidelity, or let the AI's imagination run wild.

AI Visualizer is a source of inspiration. Start with a basic model, and let AI work its magic.

The AI Visualizer window



1. Result window

This is where your concepts will be visible after clicking Generate. When generating, you will see a preview of the model created by the AI.

2. Base parameters

The base parameters affect the generated results the most. They consist of the prompt, shape fidelity, and image size.

Prompt:

This describes what you would like to see in your result. The AI understands simple definitive prompts, so long, complex sentences are unnecessary, although feel free to experiment.

- What type of building would you like to generate as a concept? (example: **a modern office building**). Experiment with several types and styles.



- What features does your concept have? (example: a modern house **with concrete surfaces**). Experiment with different textures, model features, and prompts to describe specific details.



- What style do you want the AI to generate? By default, the AI will generate photorealistic visualizations, but you can create artistic results too! (example: a **realistic architectural color pencil drawing** of a modern house). Be creative and experiment with several styles.



- Environment, weather, season, and more! By default, the AI will generate results with sunset lighting, mostly in summer, but you can change that. (example: a modern house **in winter**).



You can also define the environment or background. (example: a modern house with a **city in the background**)



Shape fidelity:

This determines to what degree the AI retains the model geometry. The higher the value, the more the AI retains your model geometry. This leads to less creative results with fewer details.

Every model is unique. Experiment with shape fidelity from different observation points on your model to find your perfect setup.

TIP: Keep your shape fidelity at 60-80% to get creative results while preserving your model geometry. As a first step, combine these values with a slightly elevated perspective view of your model:

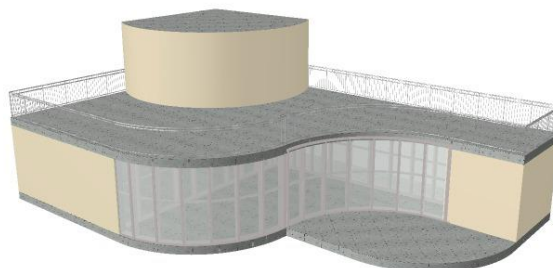


Image size:

This parameter is the resolution of the resulting image. It impacts the generation time. Higher resolutions give higher-quality images but take longer to generate. The default image size is 800x600, but it can go up to 1024x1024.

3. Advanced parameters

These are used for fine-tuning. They consist of “Iterations” and “Prompt strength.” Combine these parameters with the “Lock Result” feature (See at 5.).

Iterations:

This refers to the number of iterations in the generation process. Higher iterations give more precise results but take longer to generate.

Fewer iterations provide less precise results but generate faster.

35 is the default value and serves as a good baseline, though feel free to experiment with the given range.

Prompt Strength:

This determines to what degree the AI follows the prompt. The higher the prompt strength, the more the AI sticks to the prompt. This could lead to less creative results. Lowering the prompt strength gives the AI more creative freedom.

Experiment with different values to find your perfect setup.

4. AI Engine Settings

These help you to control the AI engine in many ways.

AI Engine Address:

This is where the AI Visualizer searches for the AI Engine. The default value is a local IP address, so AI Visualizer looks for the Engine on your computer in the default location.

Change the IP address to any local network address if you want to run the AI Engine on a different machine. The port is always 7860, but can be different when starting two or more AI Engines.

Start in High VRAM mode:

Your system configuration affects which mode you can start the AI server with.

- If your configuration has the recommended requirements, use high VRAM mode (the default setup).
- If your configuration has the minimum requirements, try high VRAM mode. If you experience problems, use low VRAM mode.

- If your configuration meets the minimum requirements, use low VRAM mode. High VRAM mode will rarely, but most likely not, work under minimum requirements.

Start AI Engine:

If you have installed the AI Engine on your device, you can start it by clicking this button. However, if the AI Engine is on a different device, this button will not work, and you will have to start it manually.

Stop AI Engine:

This button stops the AI Engine. Please note that if multiple users are on the AI Engine, this command will terminate all processes, potentially leading to data loss for some users.

Restart AI engine:

This button restarts the AI Engine. Please note that if multiple users are on the AI Engine, this command will terminate all processes, potentially leading to data loss for some users. If the Engine slows down or gets stuck after multiple generations, restarting it can be helpful.

5. Lock Result

Every generated image is different because the AI Engine uses a different “seed” (a long string of numbers) for every generation. With the Lock Result function, you can lock this “seed.”

This feature enables you to try out the concept or style of a result you like from different angles. When the lock result feature is enabled, the AI will give you new and different results that mimic the style of the locked one.

6. Generate button

You can start generating images with this button. Please note that AI Visualizer will always generate one image at a time. This setting can be changed by referring to the “Hidden Features” section.

7. Save Result

You can save your current result with this button. Please note that AI Visualizer will not save your results automatically. This setting can be changed by referring to the “Hidden Features” section.

Hidden features

Developer mode

In AI Visualizer, we use built-in prompts and definitions to create visualizations. However, these built-in definitions are turned off in developer mode, which means the AI Engine is "unlocked" and does not depend on the built-in setup.

This feature is useful for experimentation and finding unique prompts.

To activate developer mode, type `#devModeOn` in the prompt field and click Generate.

To deactivate developer mode, type `#devModeOff` in the prompt field and click Generate.

Loopback function

With the loopback function, you can use your last generation as a reference to the next one. For example.

If you generate an image with a specific prompt, such as "pencil drawing," you can remove the elements of the prompt that give it the pencil style and then loop this image to the next generation. AI Visualizer will then create a similar result to the pencil drawing without the "pencil-style" appearance. This way, you can get a different version of the same image without the specific style of the original prompt. (see images below)

To generate with loopback, hold Shift on your keyboard and press the Generate button.



Customizing the base configuration of AI Visualizer

For AI Visualizer, we have included a base configuration file. You can find it in “your Archicad folder”\Add-Ons\Extras\AI Visualizer\txt2imgConfigTemplate.json

Please note that modifying any values in this file may cause the AI Engine to malfunction. Here are some values that can be safely modified to provide custom benefits:

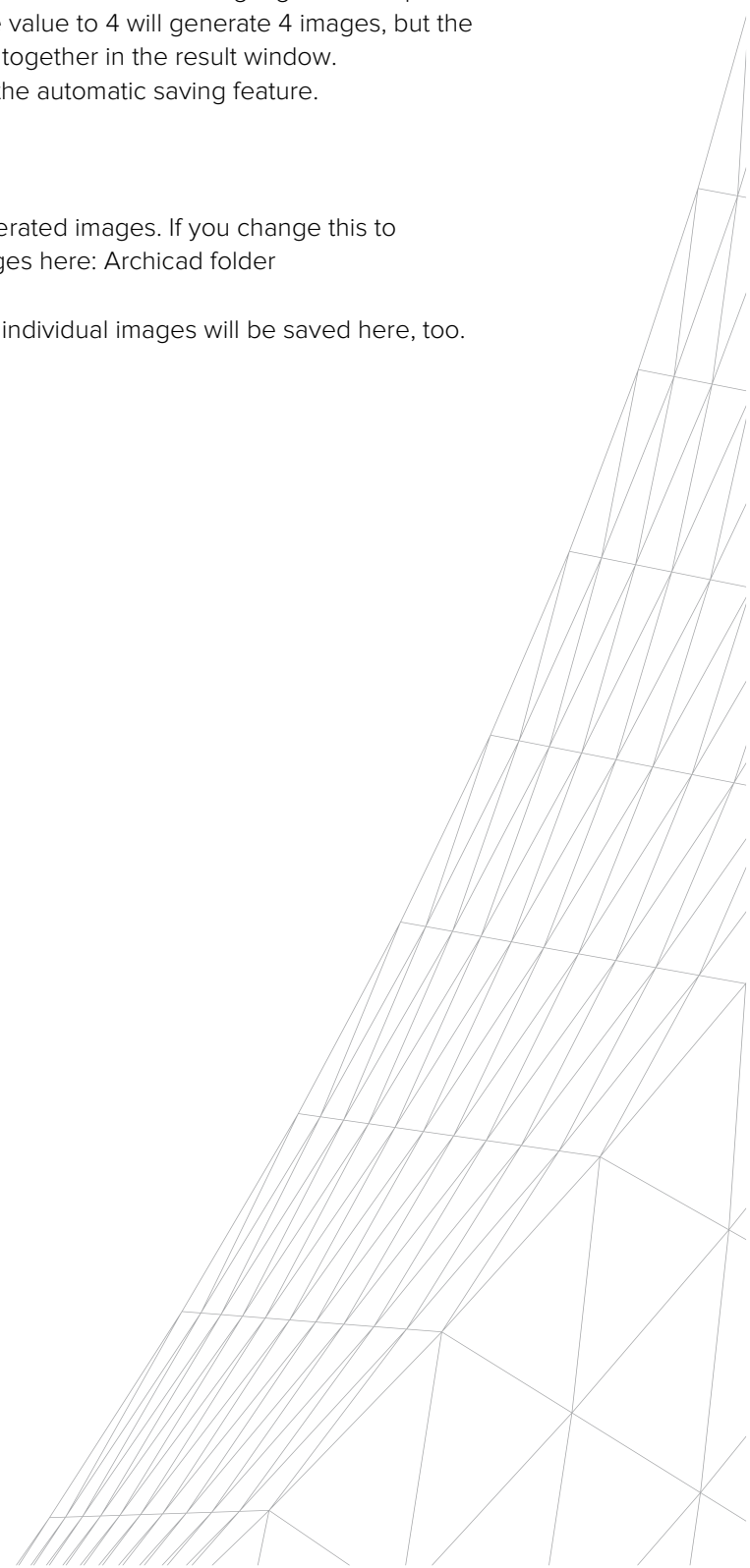
“batch_size”: 1,

This value determines the number of images AI Visualizer will create in a single generation process. It is 1 by default but can be changed; for example, setting the value to 4 will generate 4 images, but the process will be 4 times longer. All 4 images will appear together in the result window. It is recommended to use this value with the next one, the automatic saving feature.

"save_images": false,

This feature enables you to automatically save the generated images. If you change this to "save_images": true, AI Visualizer will save all your images here: Archicad folder
/sd.webui/webui/outputs/txt2img-images

Use this feature with a higher batch size value, and the individual images will be saved here, too.



Tips and tricks for better results

With this short guide, we want to give you some tips and tricks to get you started and have quality results from the get-go.

Please note that generating images with AI is a complex topic, but we will present it to you in a simplified and flexible way. Do not worry about failed results; keep on experimenting, and you will master AI Visualizer in no time.

Prompting

Prompting is describing the generated result you would like to see. It seems easy but can be difficult since the AI has its own language. Sometimes, it understands different words and sentences better than others, and sometimes it does not understand sentences at all.

Here are some tips for a start:

- AI Visualizer has a built-in prompt that ensures the results will be buildings with a render-like style, meaning you do not have to prompt “building” or “render,” allowing you to concentrate on what type of building you want to see in your result.
- Long prompts are unnecessary for decent results. Keep it simple, and first focus on more general features, then specifics.
- When it comes to prompting, you can experiment with any style, such as pencil drawings, oil paintings, digital art, or even anime:



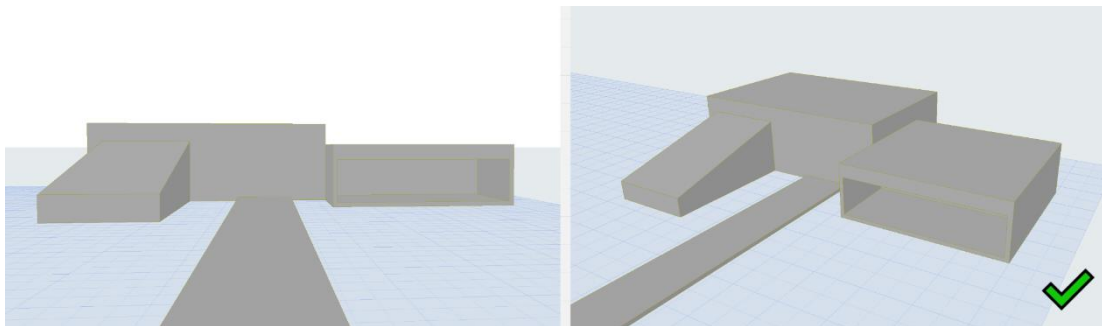
- Please refer to the Base Parameters / Prompt section for more examples.

In summary, be creative, and do not fear experimenting. You can generate and fine-tune as many times as you want and still produce great results!

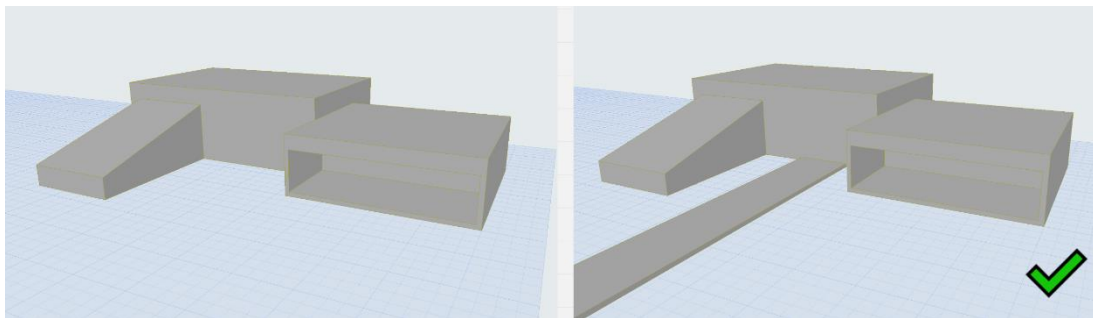
Archicad model

When it comes to the reference mass model you created, there are some good practices that can drastically increase the quality of your results:

- A simple, slightly elevated perspective view is optimal. Direct elevation, axonometric, or low perspective views are not optimal. They could still produce decent results; however, optimal perspective provides higher chances for better quality generations. Please note that if your model has lots of curves, try arranging a view that shows them clearly:



- Creating a few ground elements, like a bit of pavement, can lead to more solid results by helping the AI find the perspective and the ground level:



- Adding more details can lead to better results, but complexity isn't always necessary. Small changes can also produce interesting outcomes such as adding a few more elements rather than just primitive shapes:

