STABLE DIFFUSION #01

SD BASICS & ADVANCED PROMPTING

By HPI MAKER UNIVERSE
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LET'S GO // WebUi

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> Stable Diffusion icon on the desktop

- Python (console)
- WebUi (browser)

OSX

Windows

TEXT TO IMAGE // txt2img

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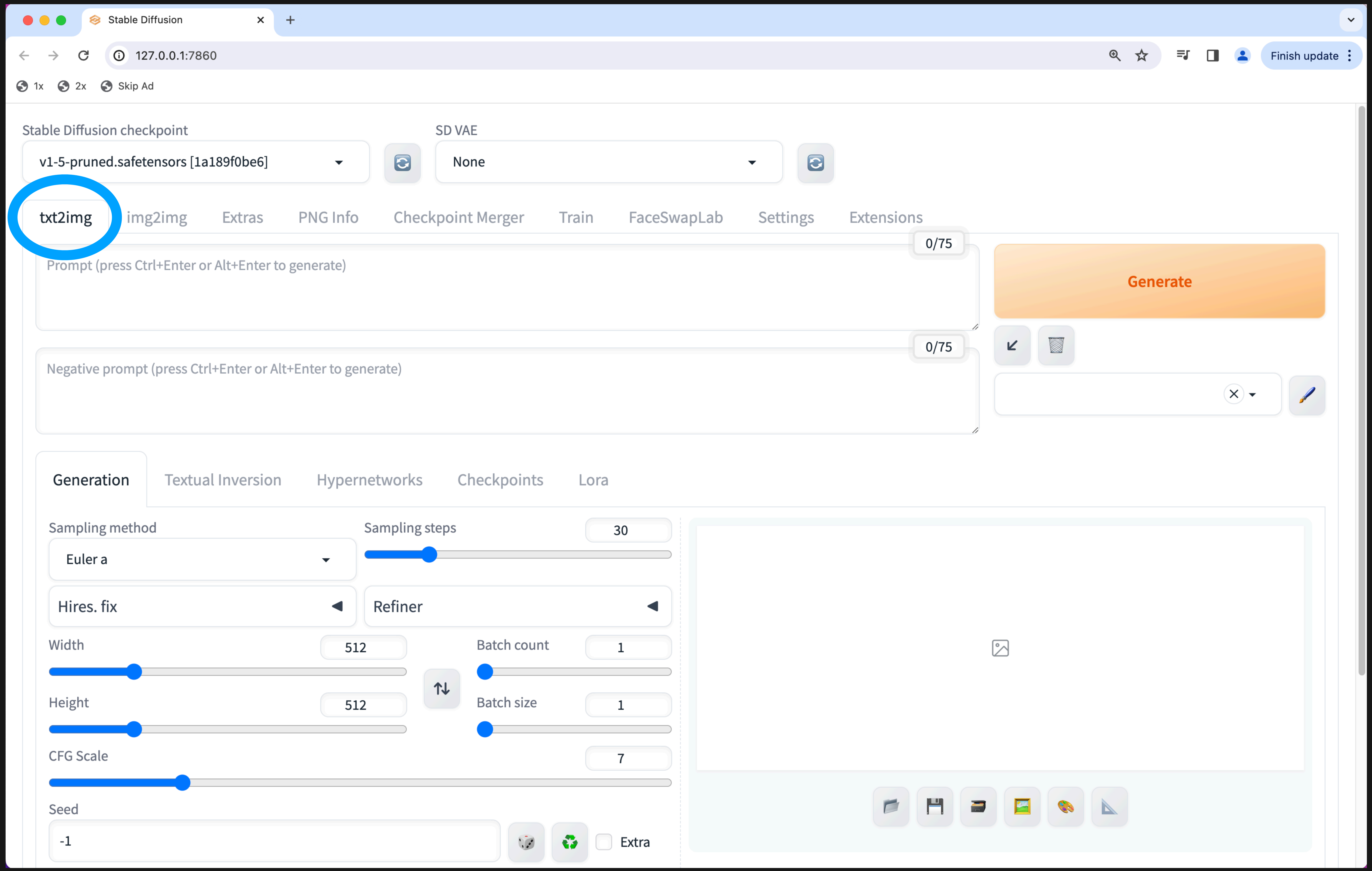
Generate images from text prompts.

> select txt2img tab



PROMPT (simple)

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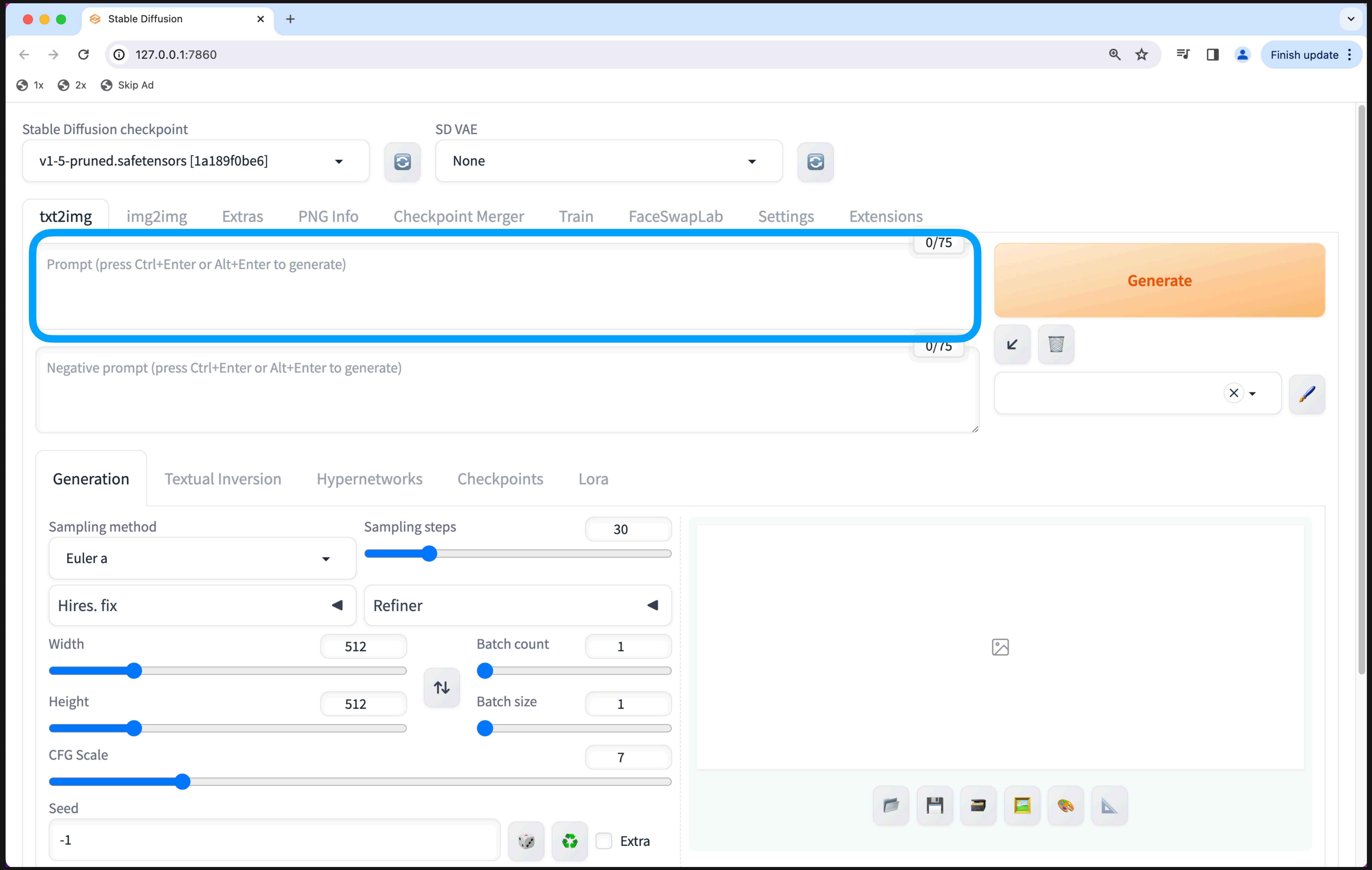
Describe the image you want to generate.

> Try a simple prompt first

> “A dog playing poker”

> Hit GENERATE



CHECKPOINT MODELS

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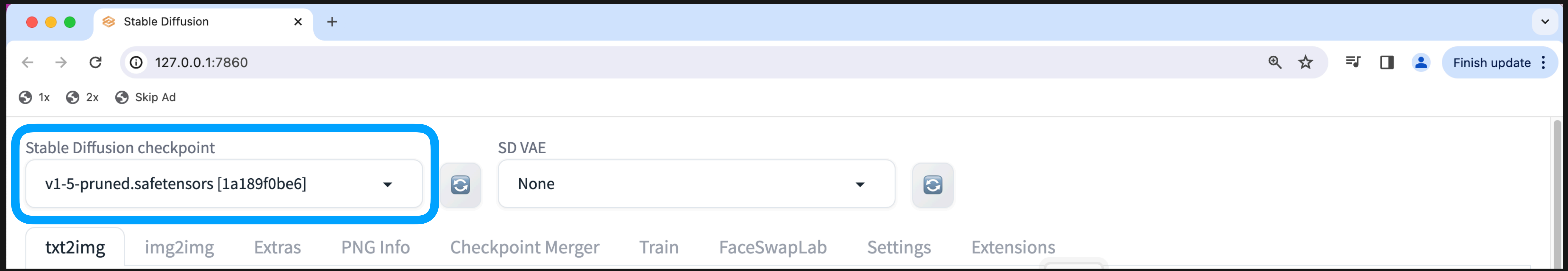
Diffusion weights /Models trained on a specific style.

> illustrations
> paintings
> anime
> fantasy
> landscapes
> animals
> fashion styles
> cgi / realistic paintings
> photorealism
> (...)

Midjourney does NOT have models & you have to adjust your style/mediaum via prompt!



CHECKPOINT MODELS

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"A cat on a bench"

v1.5-pruned (Base Model)

Anything-V3 (Anime)

RealisticVision (photoreal)

Deliberate-V3 (CGI)

CHECKPOINT MODELS

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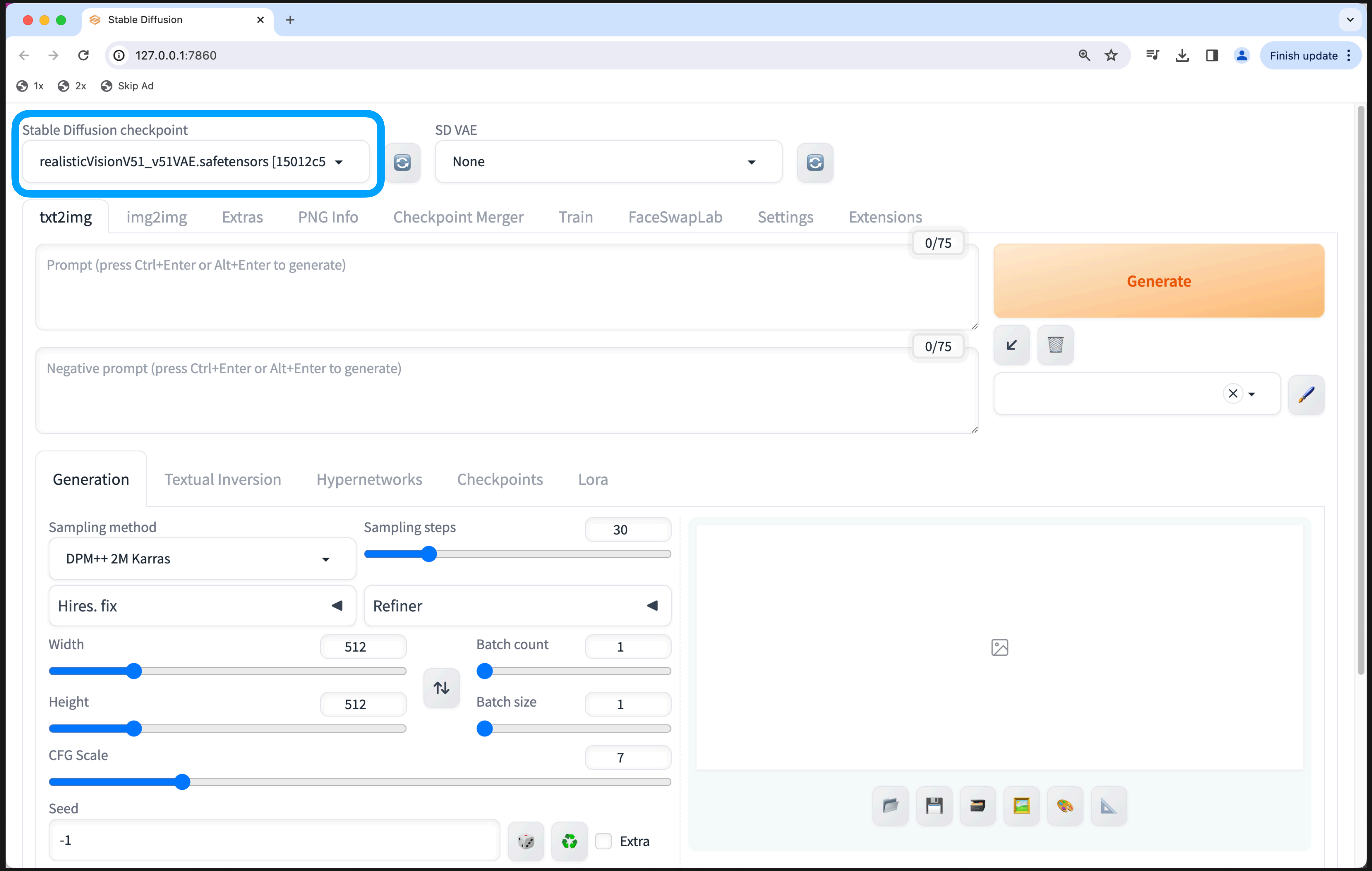
Same prompt with different models … Let’s try it out!

- Anything-V3 (Anime)

- RealisticVision (photo-real)



SETTINGS: Sampling Methods

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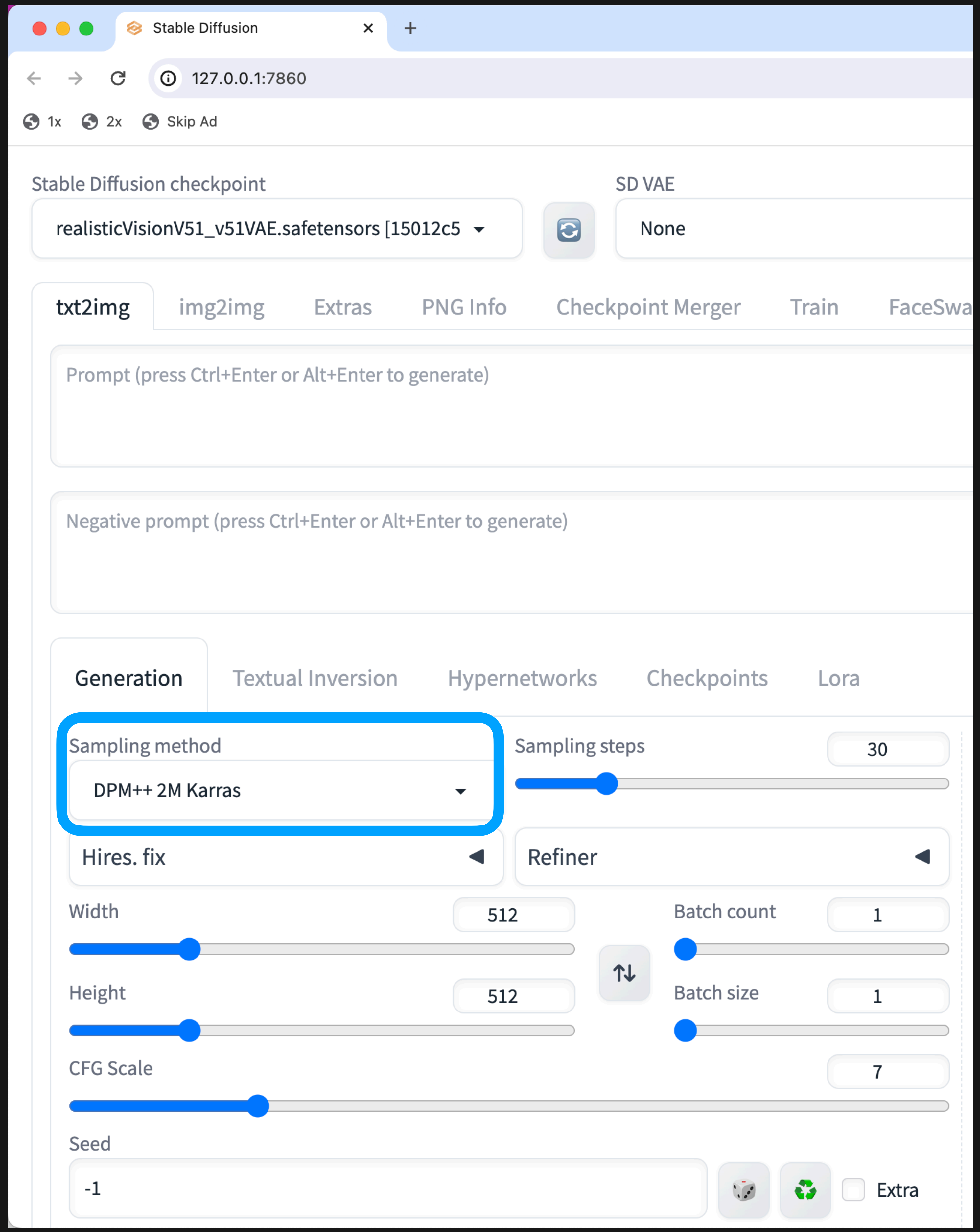
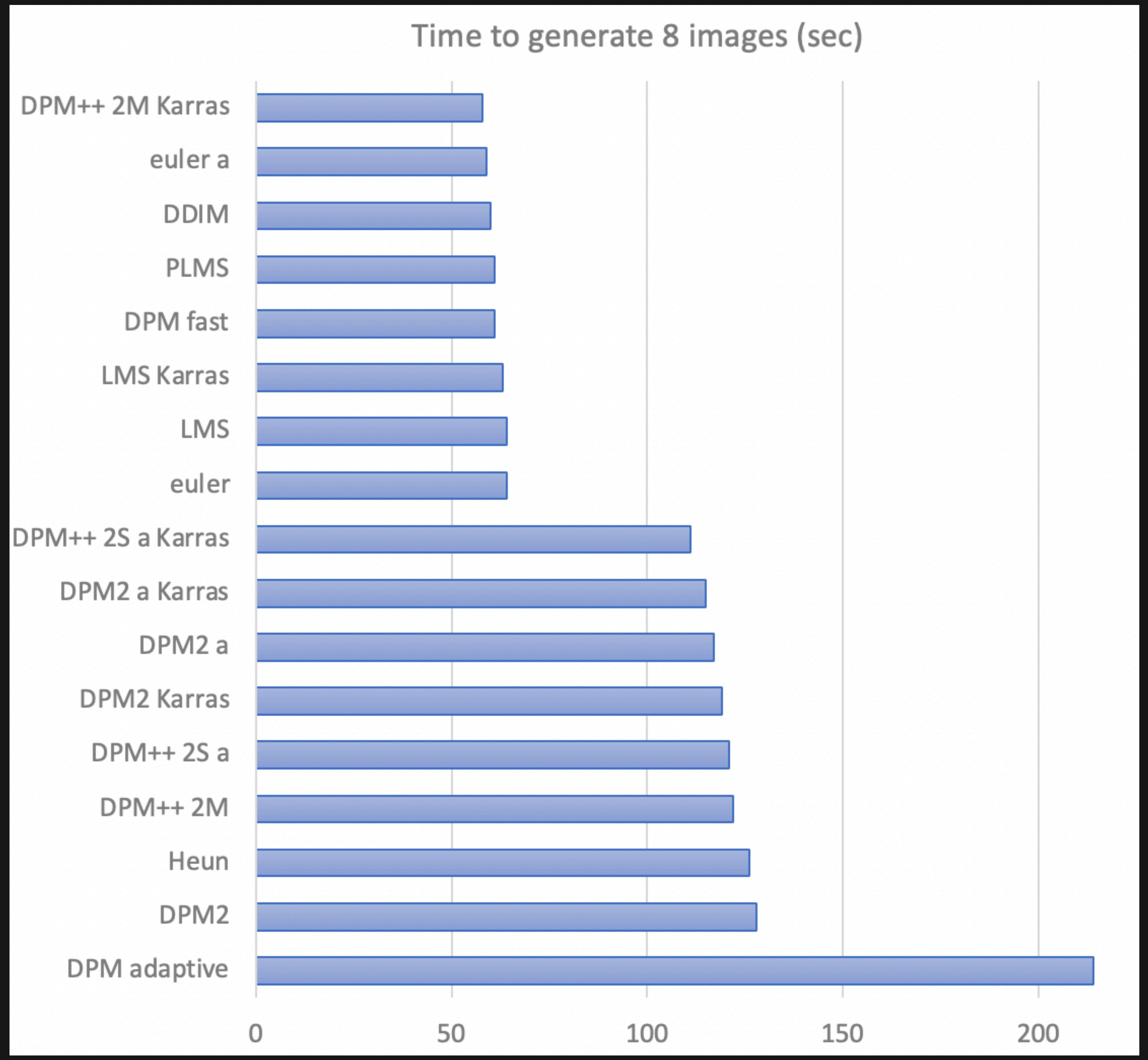
Sampling Methods
(model dependent)

Euler a: Fast

Heun: Detailed for big GPUs

DPM++ 2M Karras: Detailed





SETTINGS: Sampling Steps

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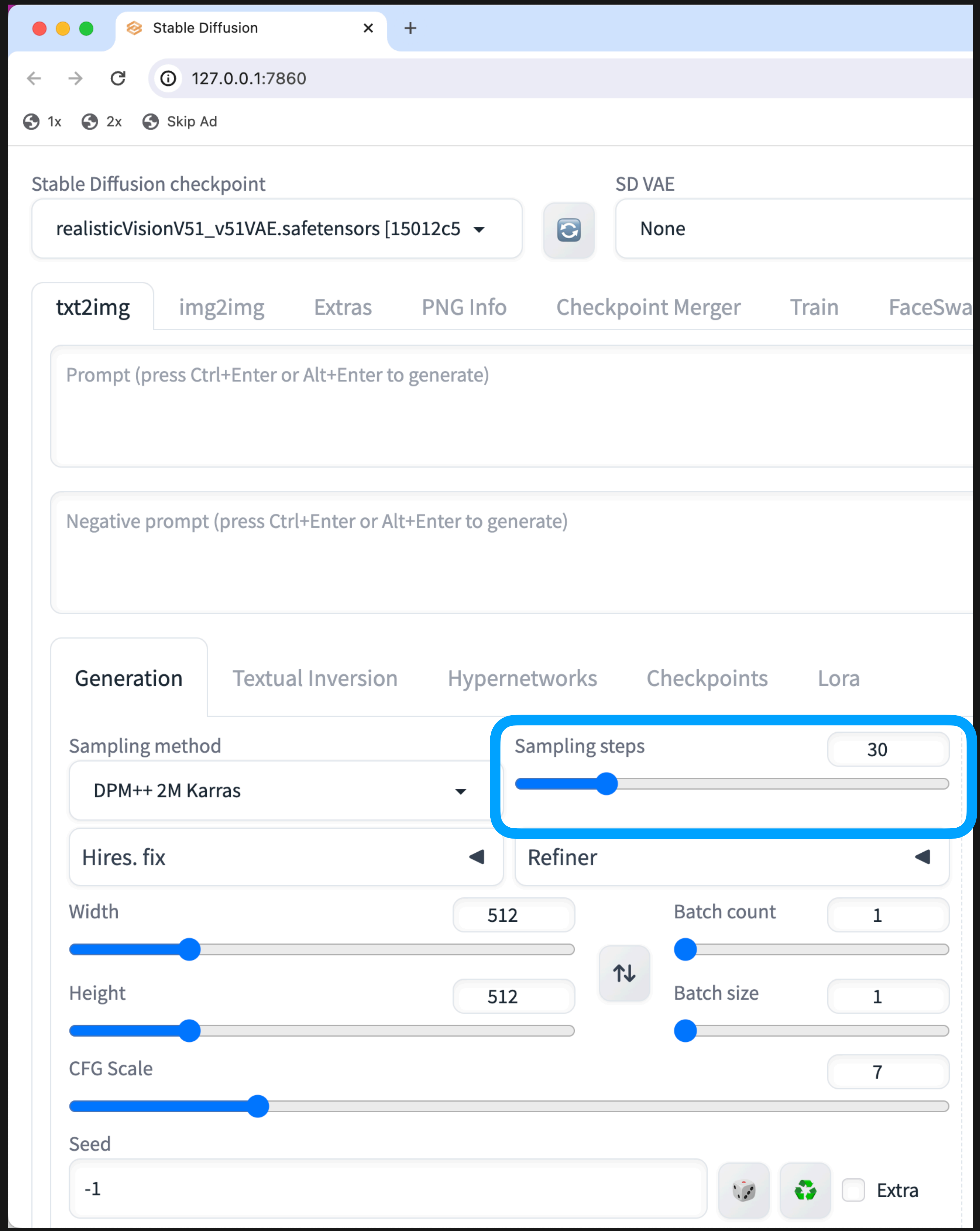
Sampling Steps
(Level of detail / Iterations)

Low number: Fast & rough
High number: Slow & detailed

Recommended:
20 - 35 Steps



SETTINGS: Image Size

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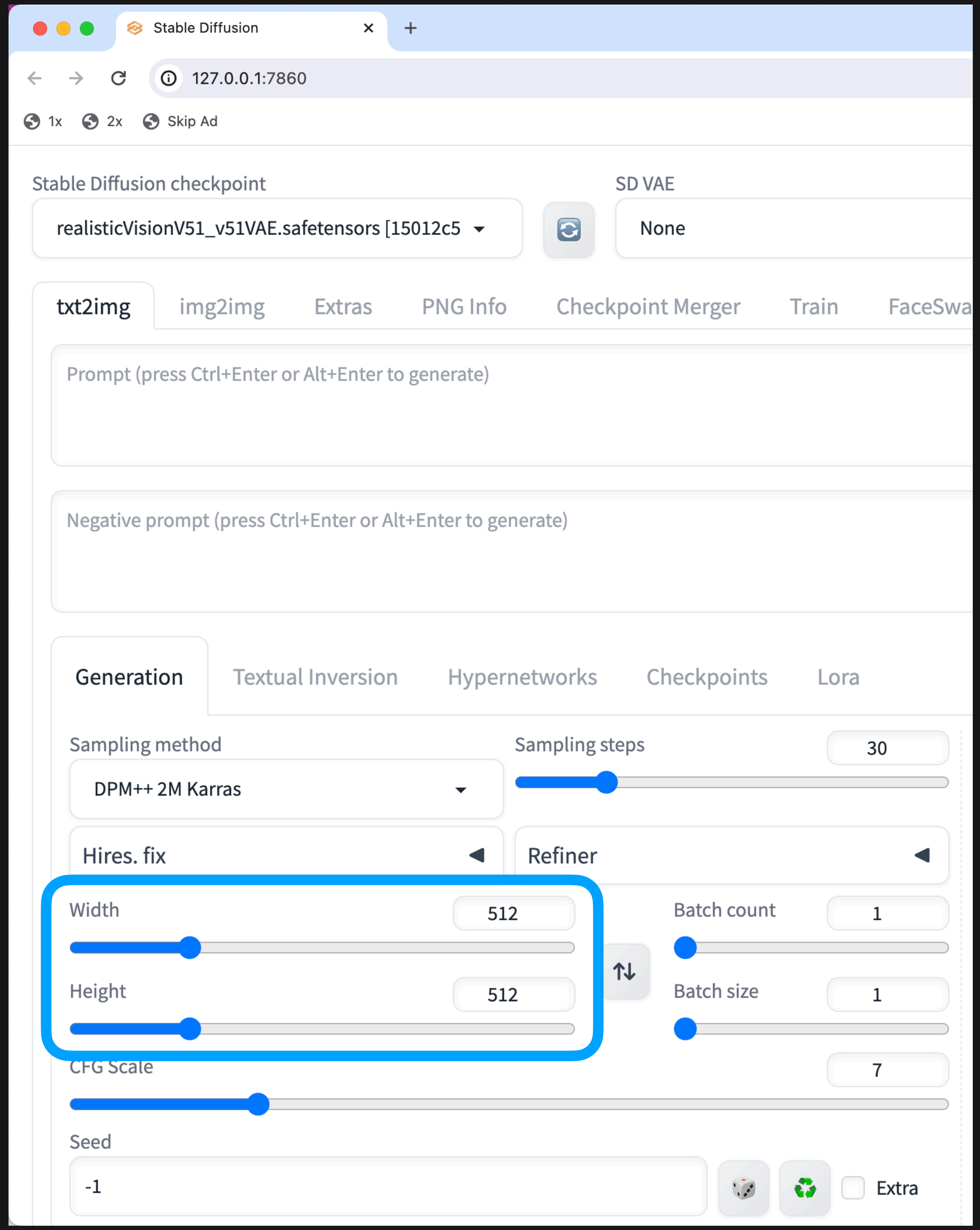
Size of output image.

512 x 512 = gold standard

512 x 768 (portrait) = OK

768 x 512 (landscape) = OK



SETTINGS: Batch Size

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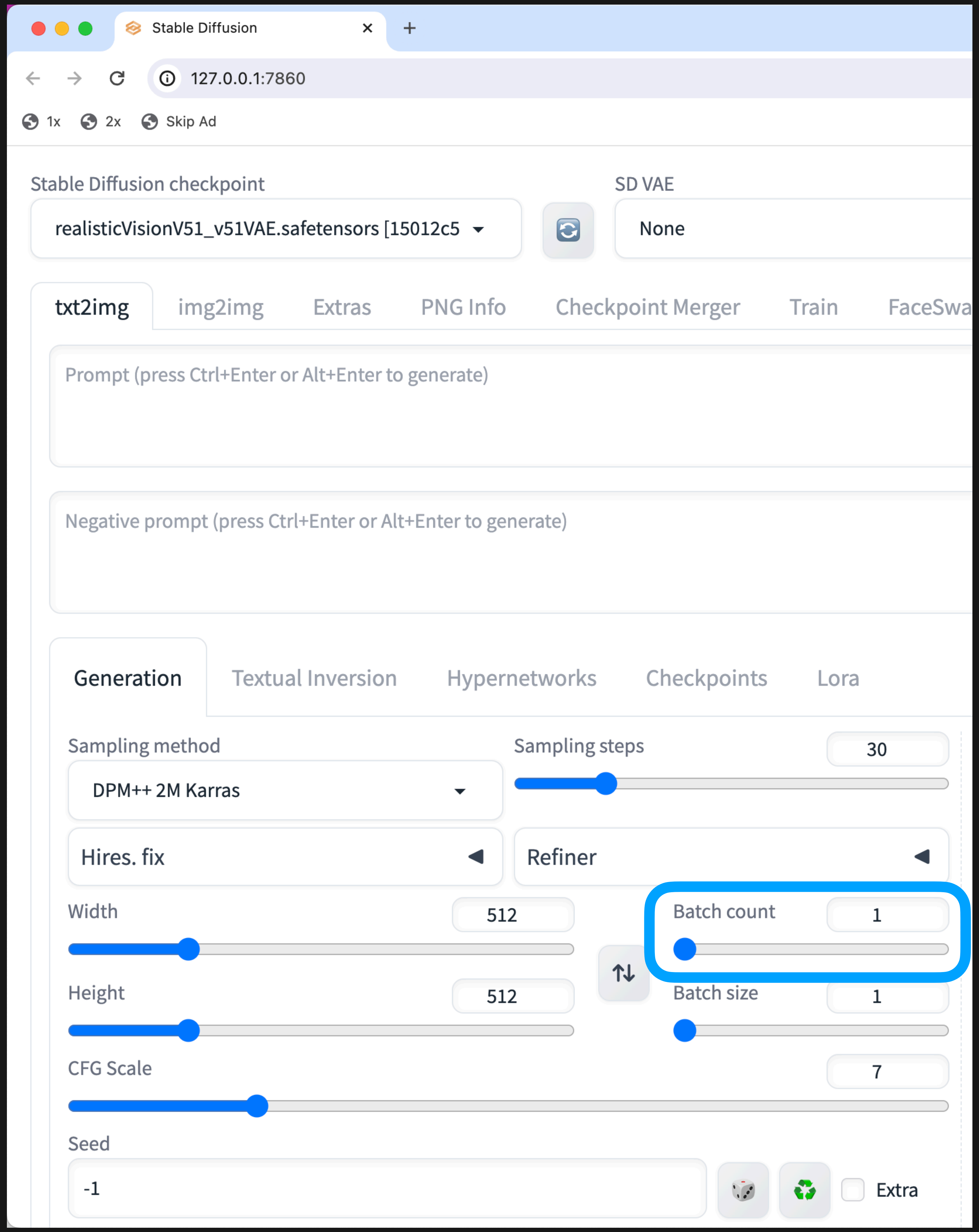
Batch count = Number of images generated each time (in series = takes more time)

Batch size = Number of images generated in parallel (To save time = don't touch it)

Recommendation:
Set batch count to
3 or 4 or more…



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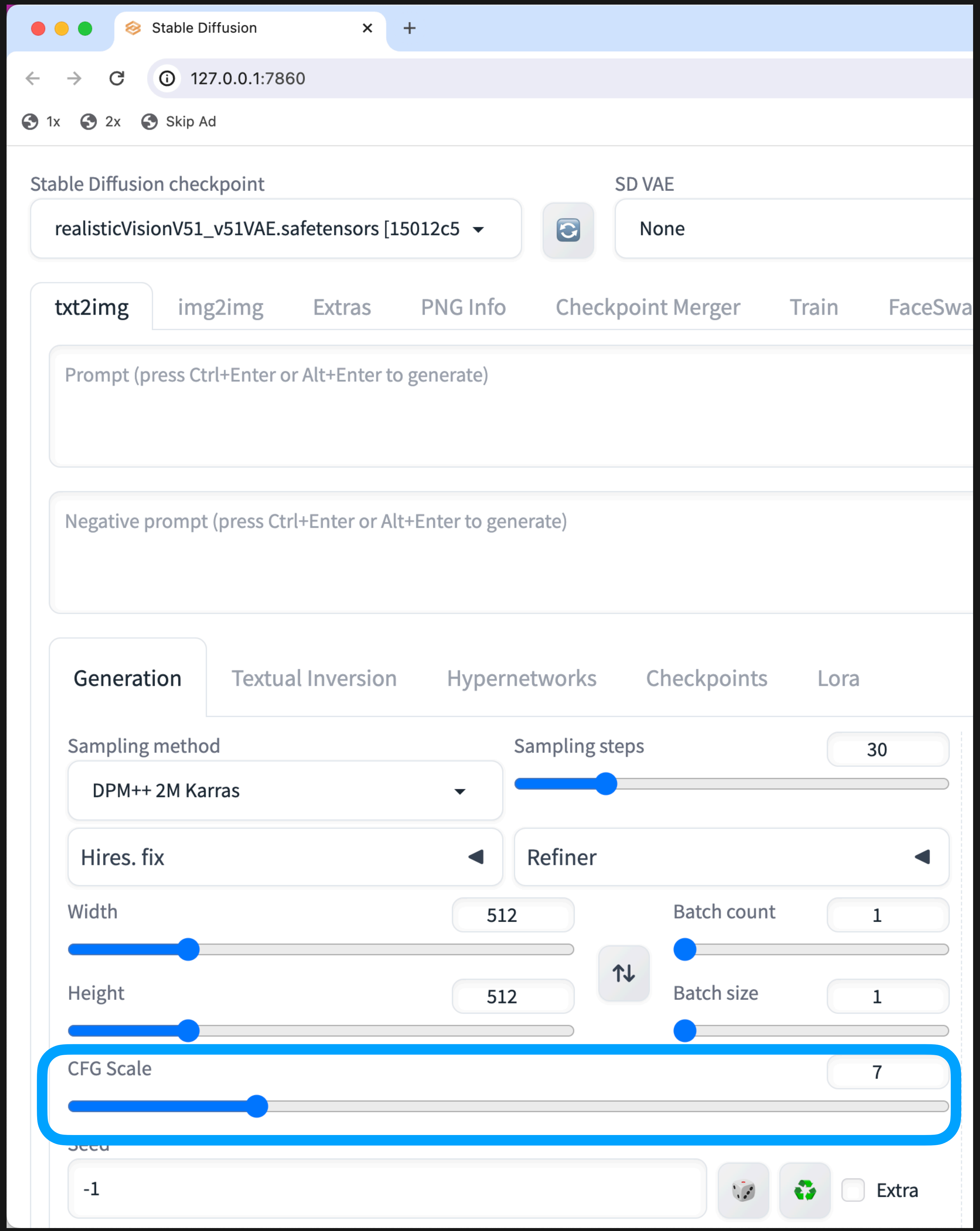
SETTINGS: CFG Scale

CFG = parameter to control
How much the model should respect your prompt.

1 - mostly ignore prompt
3 - be creative with prompt
7 - Good balance
15 - Adhere more to prompt
30 - strictly follow prompt

Recommendation: 7
Increase to 10 for more control
Stay away from extremes.



1
3
7
15
30

SETTINGS: SEED

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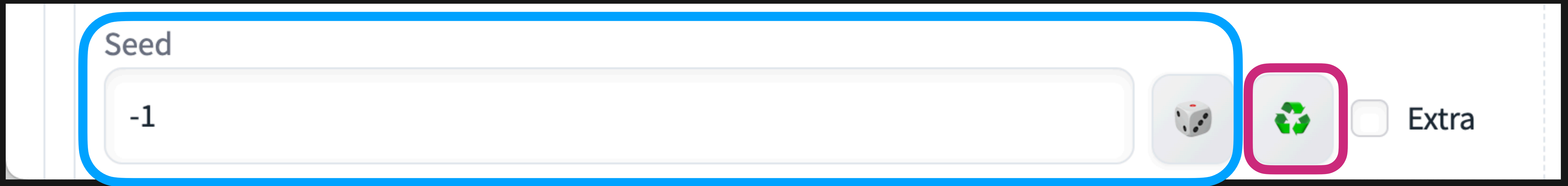
Seed “-1” = random noise used to initialise the generation process. Useful for generating new pictures with the same prompt.

Seeds can also be re-used. Useful for making changes to the prompt.



ADVANCED PROMPTING

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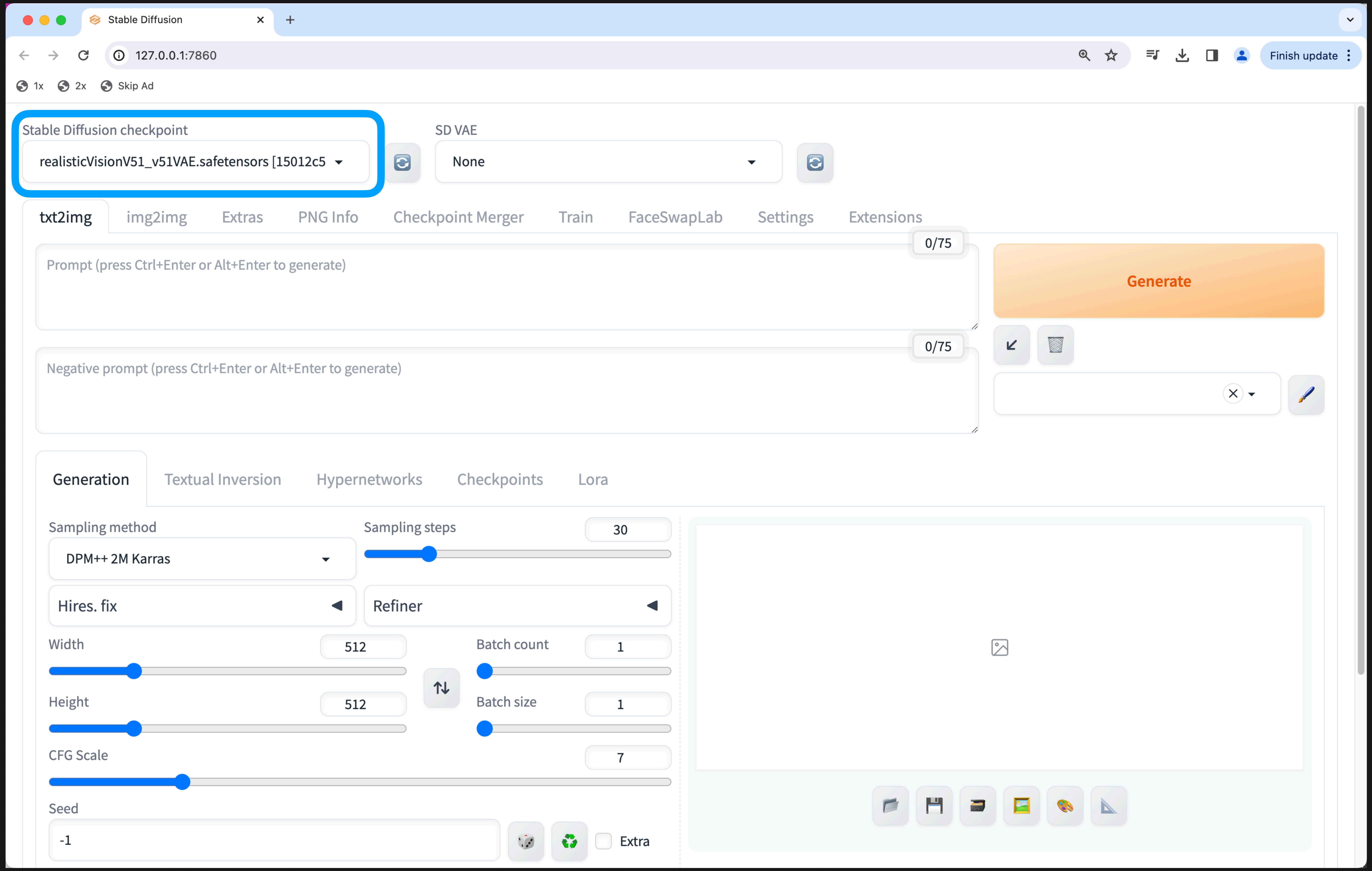
Let's all use these settings and go for a photorealistic image …



ADVANCED PROMPTING

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Goal:
A man at the sea.

(…)

ADVANCED PROMPTING

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Outcome:
A man at the sea.

> What went wrong ???

ADVANCED PROMPTING

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Outcome:
A man at the sea.

> What went wrong ???

Prompts need to be clear and concise. Describe the image in enough detail.

Start with a specific subject in mind and add keywords to steer towards a particular effect.

ADVANCED PROMPTING

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Anatomy of a good prompt:

1. Subject
2. Medium
3. Style
4. Artist / Website
5. Resolution
6. Additional Details
7. Color
8. Lighting

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1. Subject

A young caucasian man
wearing black clothes.

What is young?
> 28 y.o. caucasian man
wearing black clothes

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2. Medium

Digital painting, illustration, watercolour painting, ink drawing, etc.

> RAW photo

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3. Style

Hyperrealistic, fantasy, impressionist, surrealist, pop art, etc.

> close-up, dslr, film grain, Fujifilm XT3

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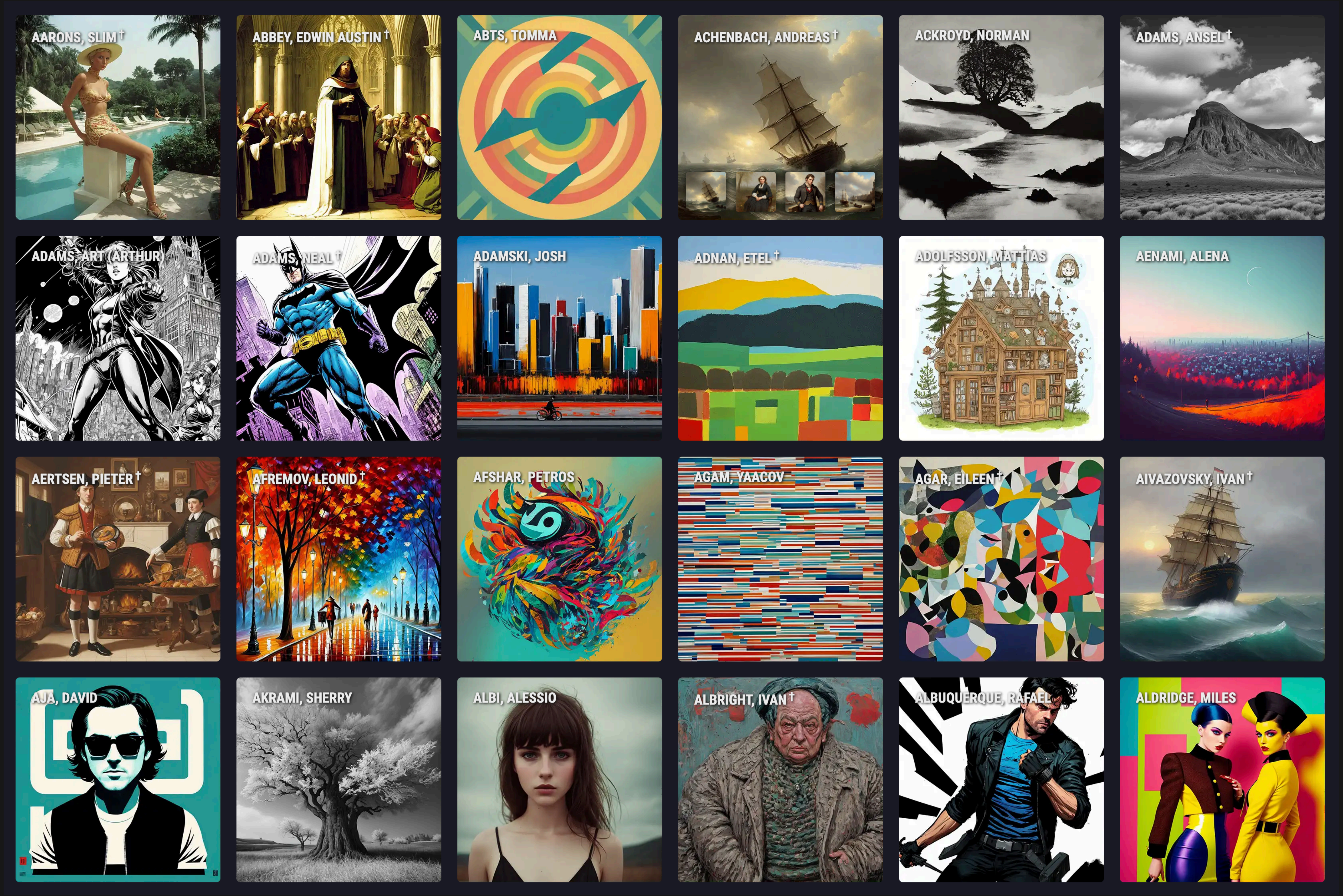
4. Artist / Website

https://supagruen.github.io/StableDiffusion-CheatSheet/

Roy Lichtenstein, Paul Zezanne, Claude Monet, Artstation, Deviant Art, etc.

> …



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5. Resolution

How sharp and detailed is the image? Do we want a blurry bokeh background? Etc.

8k UHD, f 1.8, film grain,
High detailed skin, skin pores,

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6. Additional Details

“Sweeteners” added to modify an image.

face, skin pores, coastline, overcast weather, wind, waves

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7. Color

Vivid, colourful, black & white, sepia, iridescent gold, etc.

(…)

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8. Lighting

Volumetric lighting, rim light, sunlight, backlight, dimly lit, crepuscular rays, soft lighting

> soft lighting (…)






NEGATIVE PROMPT

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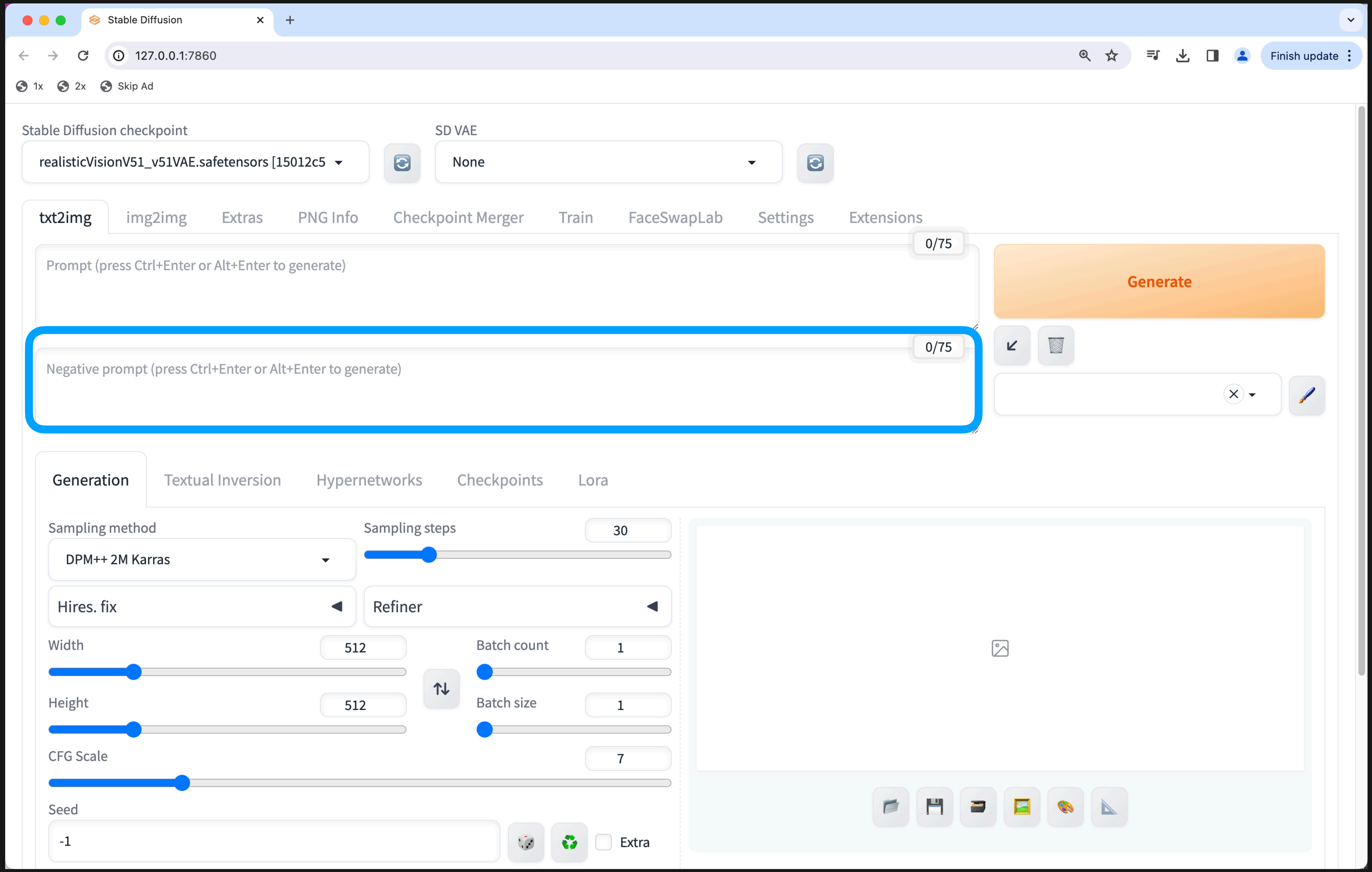
Here we put what we don't want to see (objects, styles etc.)

Instead of "without a beard"

We write "beard" in the negative prompt box.

> ugly, deformed, malformed limbs, squint, etc. TIP: hands



Midjourney uses "--no" at the end of a prompt
example: man at coast --no beard, facial hair

KEYWORD WEIGHT

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Words at the beginning and at the end of the prompt have more “weight” than the centre.

Another powerful way of giving certain words more/less importance is the syntax:

(Keyword : factor)

I.e. (beard : 0.5) or (beard : 1.5)

Midjourney uses “::number” as prompt weights
example: man::2 coast::1 beard::-0.5

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Our final prompt:

RAW photo close-up, 25 y.o. caucasian man in black clothes, face, high detailed skin, skin pores, coastline, overcast weather, wind, waves, 8k uhd, dslr, f 1.8, soft lighting, high quality, film grain, Fujifilm XT3

Negative prompt:
beard, moustache

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THANKS FOR COMING!

NEXT TIME: IMG2IMG & UPSCALING…

TEXT TO IMAGE VS IMAGE TO IMAGE

Instead of starting the generation process with random noise we can start it with our custom noise.

You don’t need to be an illustrator to create a better starting point than a random starting point. Which is why img2img is way superior.