

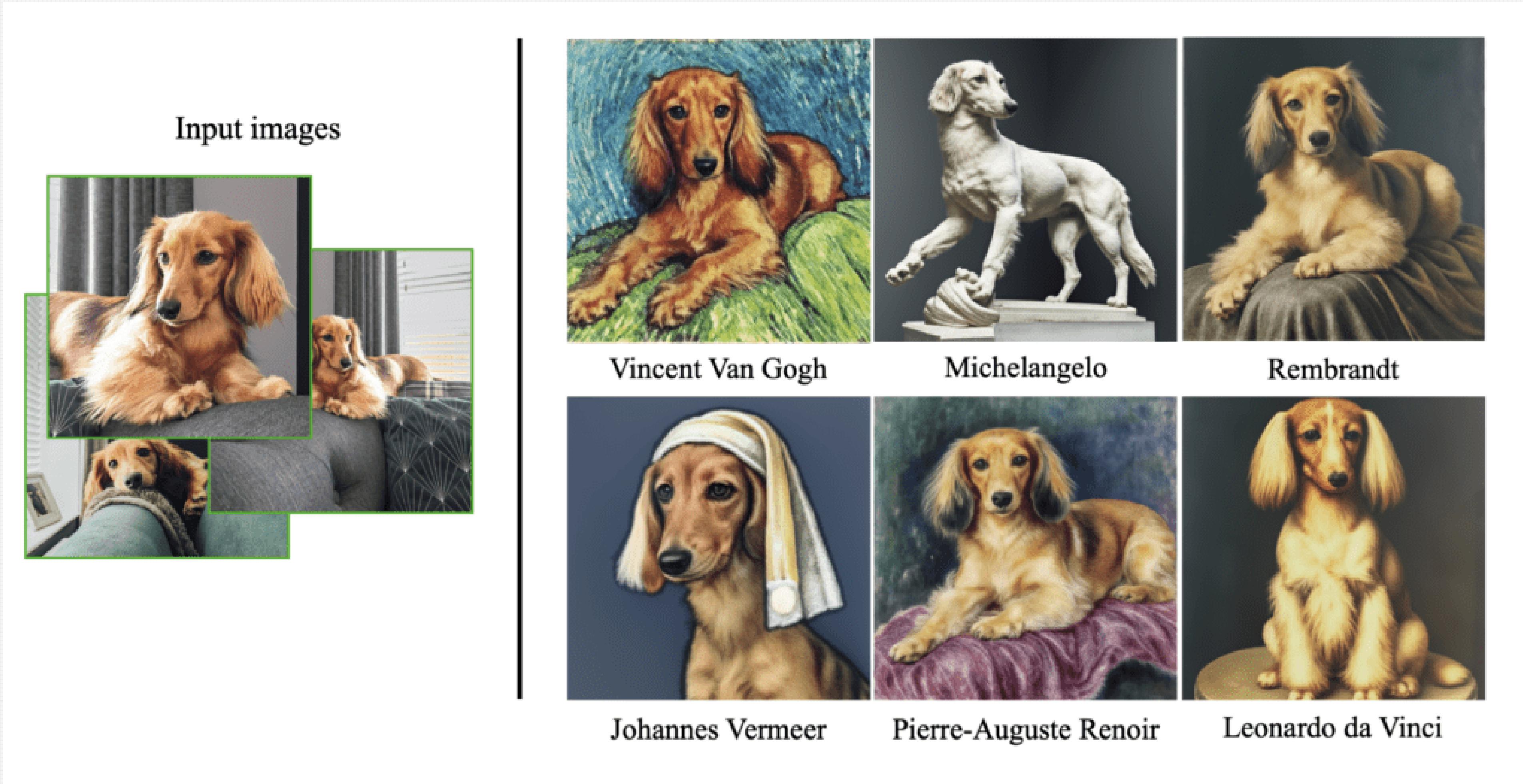
100xEngineers

# Lecture 07

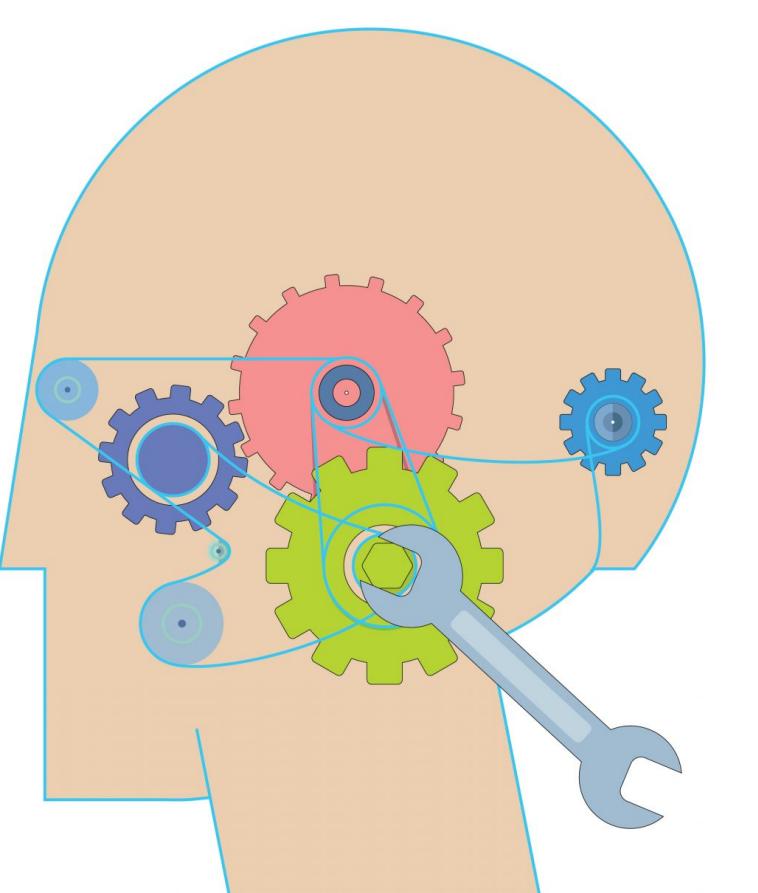
# Dreambooth - FineTuning/IPadapters

**What is Dreambooth?**

Published in 2022 by the Google research team, **Dreambooth** is a technique to fine-tune diffusion models (like Stable Diffusion) by injecting a custom subject into the model.



**What is Fine-Tuning?**



**Fine tuning** is the common practice of taking a model which has been trained on a wide and diverse dataset, and then training it a bit more on the dataset you are specifically interested in. This is common practice on deep learning and has been shown to be tremendously effective all manner of models from standard image classification networks to GANs.

In this example we'll show how to fine tune Stable Diffusion on a Pokémon dataset to create a text to image model which makes custom Pokémon based on any text prompt.

What are the role of **Tokens** in Finetuning?

Stable Diffusion

# Data preparation

- 10-20 Images of person or an object
- Use Birme for resizing Images Depending on the model
- <https://www.birme.net/>

# Examples

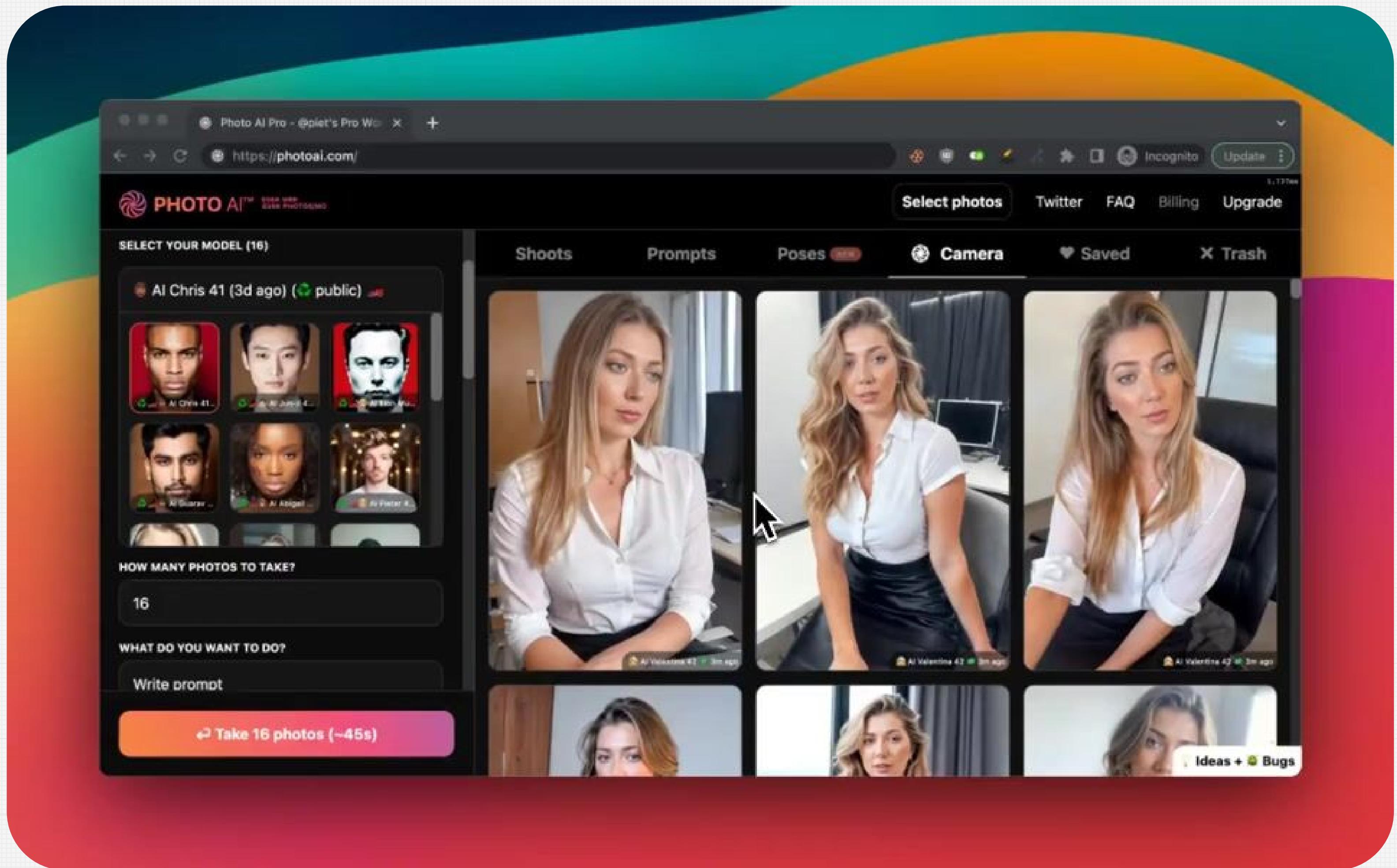
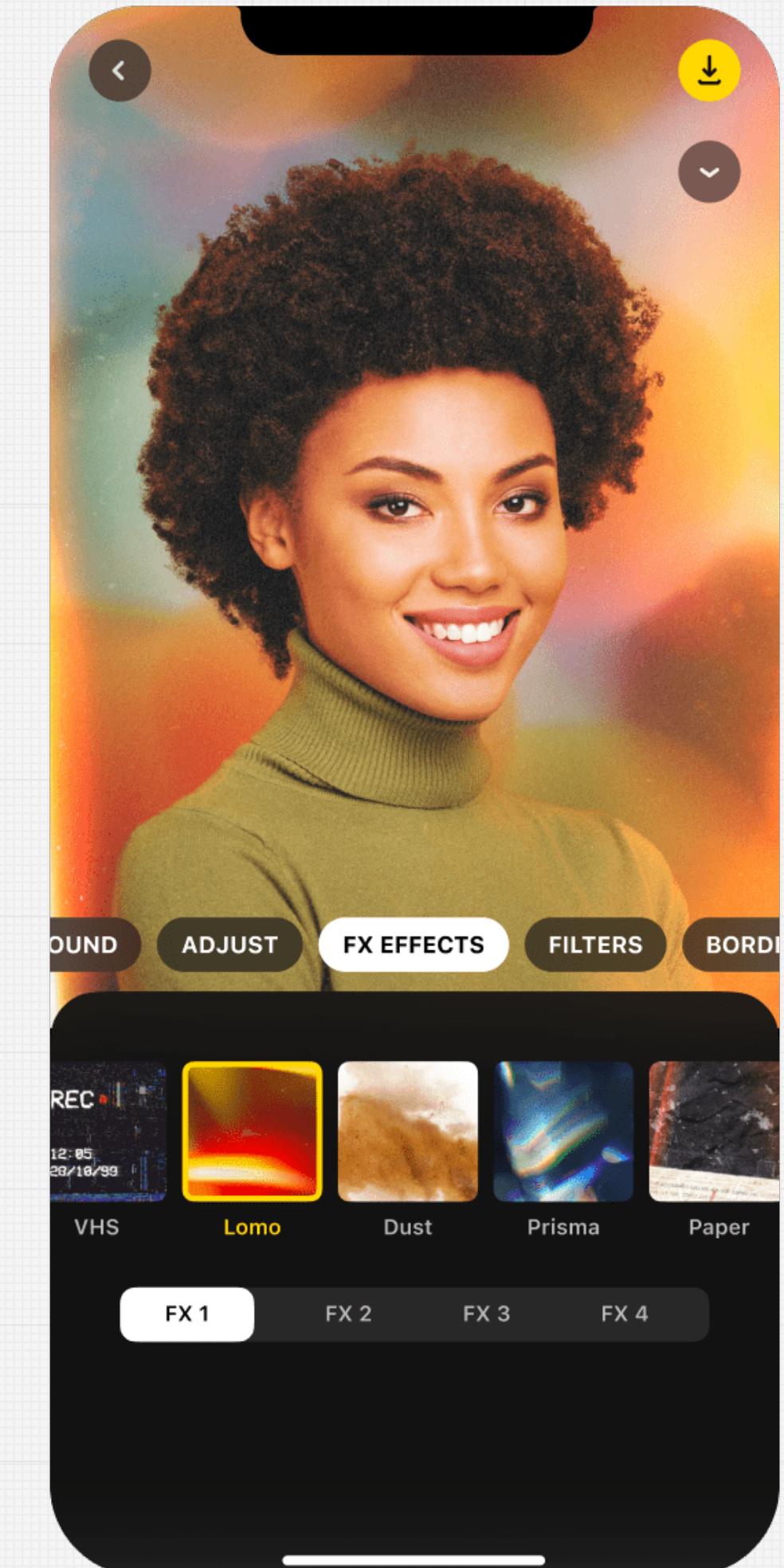


Photo Ai



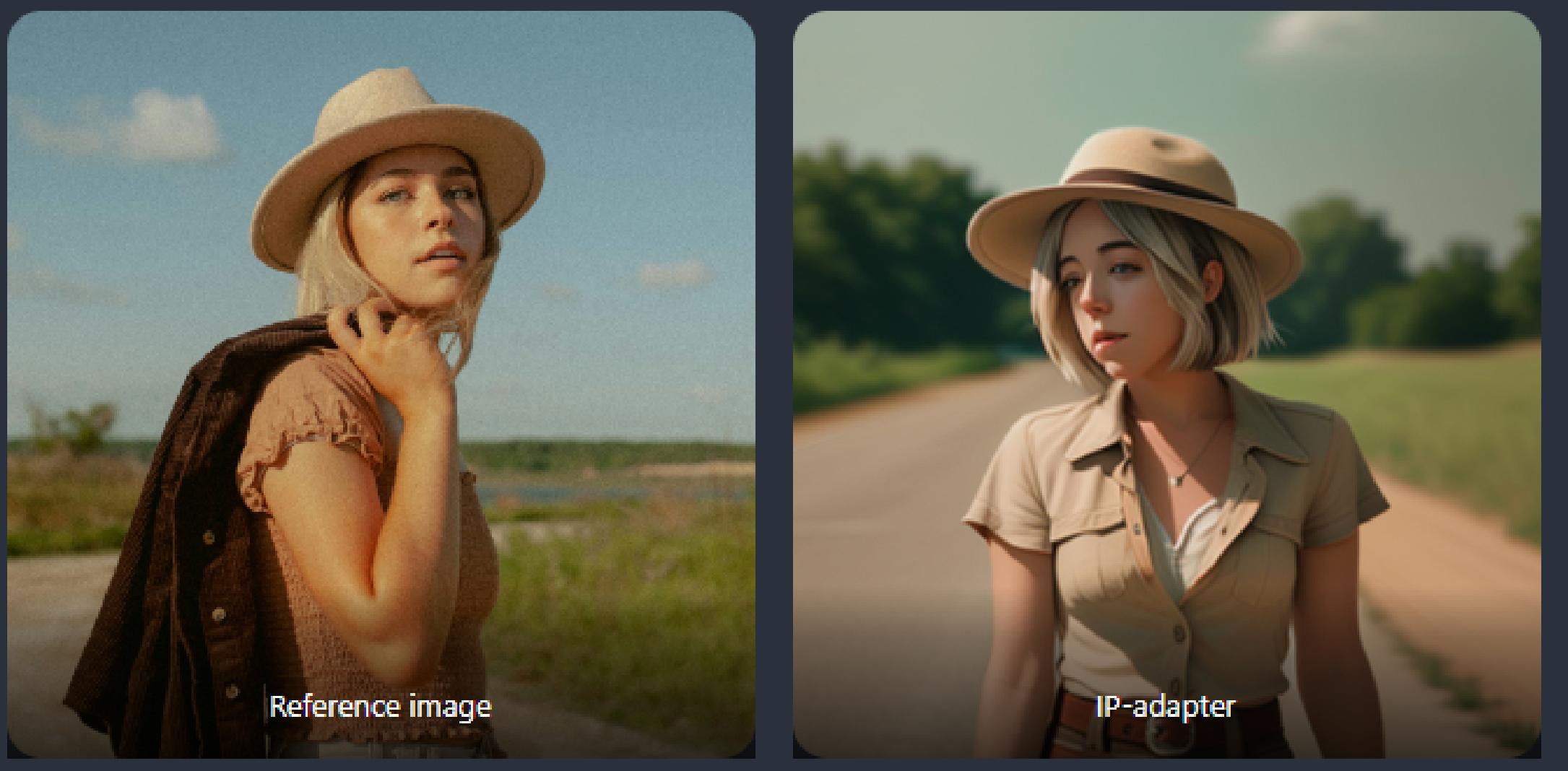
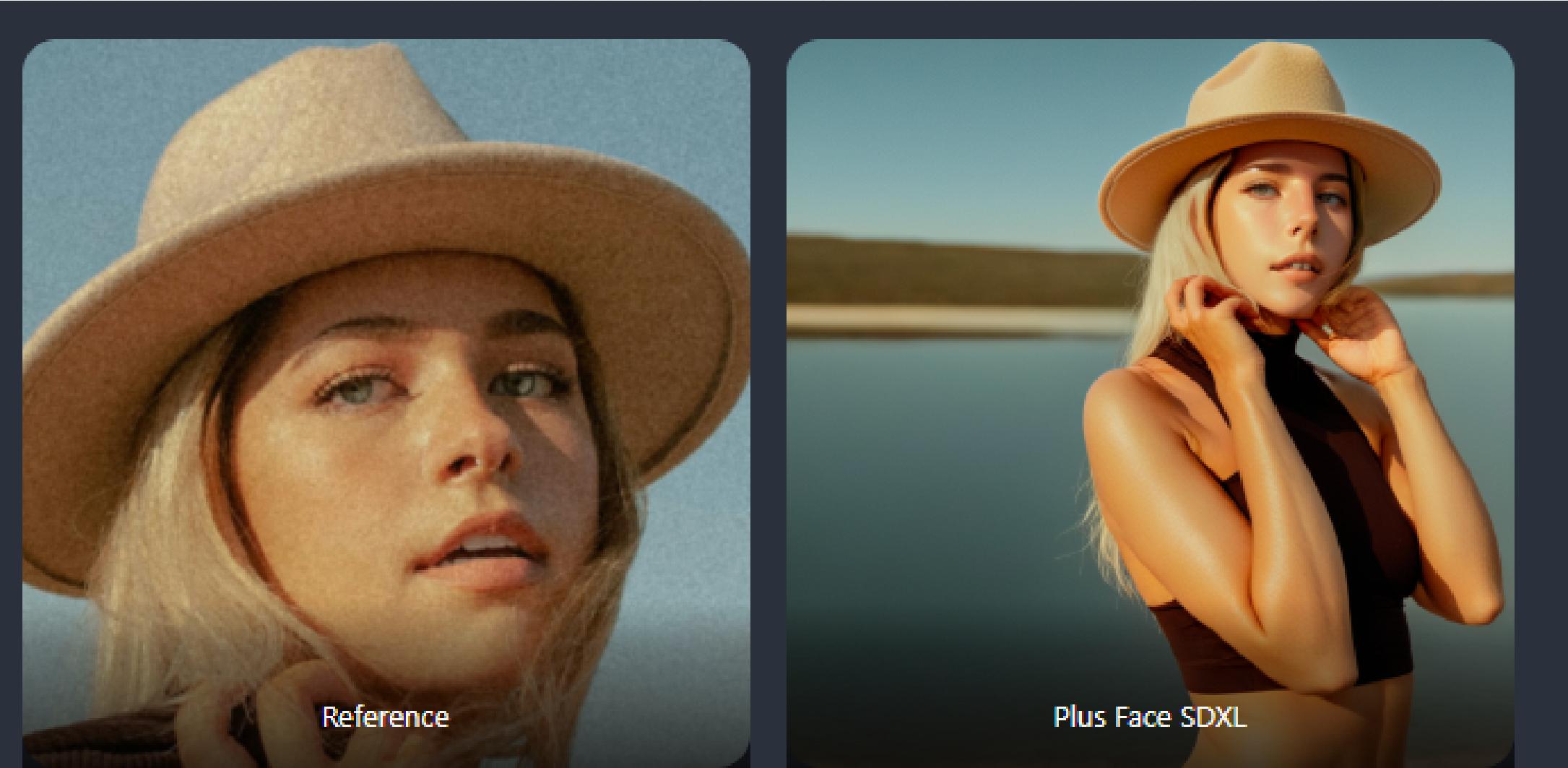
Lensa Ai

# Dreambooth vs LoRA

- **Dreambooth Advantages** Dreambooth is a powerful technique that can modify everything within the network, even outside of the diffusion network. It generates a whole new model file when a new model is trained, and it changes all the weights of the entire model. However, it produces larger output files and may require more VRAM, making it less suitable for face-based training. Dreambooth can be viable for users with at least 12GB of VRAM and is recommended for training complex models when the number of photos to train is more than 20 or 30.
- **LoRA has several advantages over Dreambooth**, such as faster training times, lower compute requirements, smaller trained weights, and easier sharing of fine-tuned models. However, Dreambooth is more powerful and can modify the entire network, making it a better option for certain use cases. Some users claim that LORA performs poorly on faces compared to Dreambooth, while others prefer LORA for face-based training. The ideal method depends on the specific use case, image dataset size, and user preference.

# IP-Adapters

- IP-Adapter models – Plus, Face ID, Face ID v2, Face ID portrait, etc.
- How to use IP-adapters in AUTOMATIC1111 and ComfyUI.



# Resources

- <https://stable-diffusion-art.com/dreambooth/>
- <https://github.com/2kpr/dreambooth-tokens>
- <https://www.birme.net/>
- <https://dreambooth.github.io/>
- <https://chord.pub/article/40820/advantages-of-using-lora-vs-dreambooth>
- <https://stable-diffusion-art.com/ip-adapter/>

100xEngineers

# Questions & Answers