REPORT ON ML ENGINEER ASSIGNMENT @AYNA

Submitted by:

Shivanand Kerur

Model : Dreamlike photoreal 2.0

Dreamlike Photoreal 2.0 is a photorealistic model based on Stable Diffusion 1.5, made by dreamlike.art.

Enhanced Photorealism: Dreamlike Photoreal 2.0 takes photorealism to the next level, offering remarkably realistic images that closely resemble photographs.

Improved Stability: Building upon the foundation of Stable Diffusion 1.5, this version offers enhanced stability during the image generation process, resulting in consistent and high-quality outputs.

Higher Resolution Outputs: Users can expect higher resolution images with greater clarity and detail, enabling them to generate stunning visuals suitable for various applications.

Advanced Noise Reduction: The model incorporates advanced noise reduction techniques, minimizing artifacts and imperfections in the generated images, thus enhancing overall image quality.

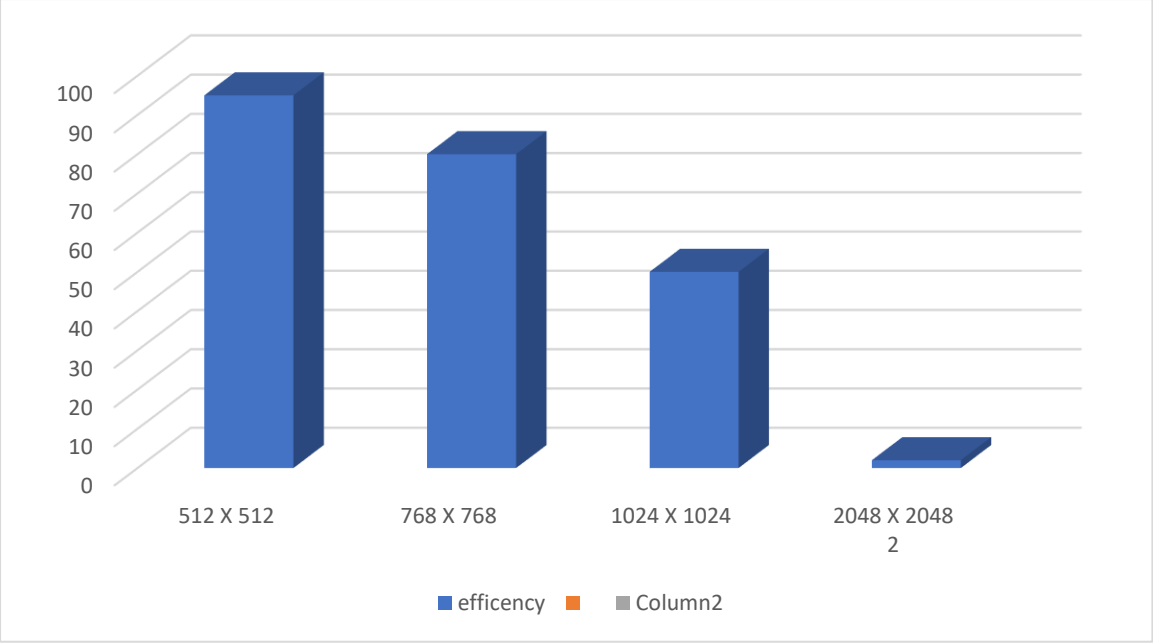
Fine-tuned Control: Dreamlike Photoreal 2.0 provides users with finer control over various aspects of the image generation process, including lighting, color balance, and composition, allowing for greater customization and creativity.

Expanded Compatibility: The model is designed to be compatible with a wide range of input styles and formats, ensuring flexibility and ease of use for users across different creative projects.

Faster Rendering: With optimized algorithms and improved processing efficiency, Dreamlike Photoreal 2.0 offers faster rendering times, allowing users to generate photorealistic images more quickly.

Enhanced Training Data: The model benefits from an expanded and curated dataset, comprising diverse and high-quality images, resulting in improved learning and better representation of real-world visual characteristics.

This is chart I obtained after experimenting on model dreamlike photoreal 2.0 with base images to 2048 X 2048 images



512 X 512 base image from model dreamlike photoreal 2.0

Advantages:

1. best for 512 X 512 base image and processing time is also less and provide efficiency of 95%.
2. no distortion present in 512 pixel.
3. able to understand dress based prompts effectively.

Disadvantages

1. efficiency 768 X 768 base image from model dreamlike photoreal 2.0

768 X 768 base image from model dreamlike photoreal 2.0

Advantages:

1. best for 768 X 768 base image and processing time is also less and provide efficency of 92%.
2. no distortion present in 512 pixel.
3. able to understand dress based prompts effectively.
4. good for landscape images and fashion prompts also

Disadvantages:

1. Less efficiency in eyes

1024 X 1024 base image from model dreamlike photoreal 2.0

Advantages:

1. best for 1024 X 1024 base image provide efficency of 70%.
2. no distortion present in 1024 pixel.
3. able to understand dress based prompts effectively.

4. good for landscape images and fashion prompts also

Disadvantages

1. Less efficiency in eyes
2. bad for portrait images
3. process time is high

2048 X 2048 base image from model dreamlike photoreal 2.0 (I got the output first time but as I tried for second time gpu is out of memory)

Disadvantages:

1. Distorted image

Other prompts output



Overall model adavantages:

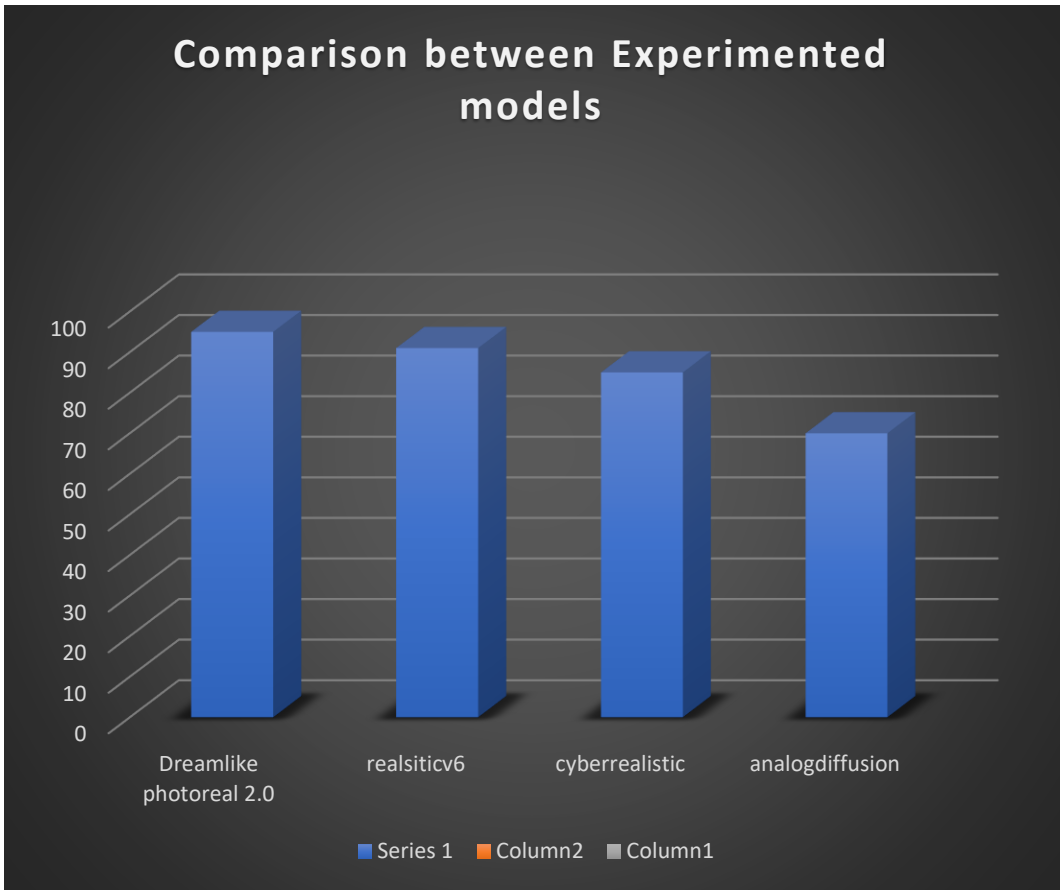
1. Through my experimentation this model is best one that I tried from all of the rest models like realsiticv6,cyberrealistic
2. Less process time
3. High efficency
4. Photorealistic image
5. Able to understand fashion prompts very well

Limitations of model:

1. Less efficency in eyes
2. Need descriptive prompt to get efficent image

Limitation Example outputs

Comparison between experimented models for base image 512 X 512 and process time



Overall

Dreamlike photoreal 2.0 is best for producing photorealstic images

As I tried realisticv6 model but its not as clear as dreamlike photoreal 2.0 this is my conclusion(sometimes contains nude images for fashion prompts)

As for cyberrealstic model is not best but its okay for photorealstic images

Analog-diffusion model is worst among four model I experimented out more distortion can’t able to grasp the prompt.

(I learnt lot through this assignment even if I am not selected give me feedback I want to learn from mistakes and try hard for the next time)