

Job Task

For Junior AI Engineer

@ [Blackdeep Technologies](#)

Task2

Create a realistic family photo featuring a man and a woman outdoors. The goal is to assess your ability to create a high-quality image and provide a clear explanation of the creative process, regardless of the method chosen.

Instructions

1. Image Generation

- a. Create a realistic family photo of a man and a woman outdoors in a scenic natural setting (e.g., a park with sunset).
- b. Appearance Tags: Include specific appearance details for each subject, such as hair, clothing, and general appearance. The choice of these details is up to you.
- c. If the chosen method offers, try different models, settings, and enhancement tags.

2. Explanation Requirements

- a. Provide a written explanation detailing:
 - i. The prompt used
 - ii. The appearance details used in the prompt.
 - iii. The tools and models used for the image generation.
 - iv. The steps taken to ensure maximum realism.

3. Bonus Criteria (Optional for Extra Credit)

- a. Demonstrate usage of either **ComfyUI** or Stable Diffusion WebUI.
- b. Links to the social repositories:
 - i. **ComfyUI GitHub**
 - ii. Stable Diffusion WebUI GitHub

UI of Choice:

-ComfyUI

Prompts Used:

- **Positive:**

To fulfill the assignment request and output a photorealistic image, I wrote a positive and negative prompt each containing key words, e.g. details of objects (Environment and the girl and the boy). The Positive prompt is as follows:

score_9, score_8_up, score_7_up, source_photo, fisheye lens, natural lighting, soft warm tones, professional portrait, front-facing pose, neutral expression with slight smiles, eye contact with the camera, sharp focus, ultra-detailed, hyper-realistic, rating_safe

Man: Tall, fit, short black neatly styled hair, well-groomed stubble, deep dark eyes, warm medium brown skin tone, wearing a fitted black button-up shirt with sleeves rolled up, tailored beige-black pants, black leather watch, upright but relaxed posture, natural skin texture with realistic highlights and shadows.

Woman: Medium height, fit, long wavy auburn hair neatly styled, soft hazel eyes, fair skin tone, wearing a flowy pink summer dress with delicate floral embroidery, fabric with fine texture and natural draping, small silver pendant necklace, subtle and natural makeup, soft confident smile, standing upright with a relaxed and comfortable demeanor.

Environment: Outdoor park setting with soft, diffused daylight, tall trees with textured bark, well-maintained green grass, natural dirt pathways, a calm lake in the background with gentle ripples, scattered wildflowers, muted color palette for a balanced natural aesthetic, subtle depth of field for professional portrait composition, realistic atmospheric perspective.

Enhancements: Ultra-sharp details, realistic skin textures, high-definition fabric rendering, soft and even lighting, natural and well-balanced color grading, cinematic yet professional composition, clear and well-defined facial features, subtle reflections in eyes, neutral but warm tones for an authentic and polished look.

- **Negative:**

The negative prompt acts as a barrier to avoid distortions. I researched what prompts would be good for a picture of this caliber and wrote the following prompt:

(worst quality, low quality, blurry, pixelated, unrealistic, overexposed, underexposed, oversaturated, distorted proportions, exaggerated features, unnatural lighting, harsh shadows, extreme contrast, neon colors, CGI, cartoonish, anime, painting, sketch, overprocessed, artificial skin texture, plastic-looking, lens flare, chromatic aberration, watermark, text, extra limbs, disfigured, asymmetrical face, unnatural expressions, exaggerated smiles, extreme emotions, messy hair, cluttered background, distracting elements, busy composition, poor framing, fisheye distortion, incorrect anatomy, awkward posture, stiff posing, unnatural fabric folds, low-detail hands, missing fingers, incorrect eye reflections, overdone makeup, glossy skin, watches, watch)

Appearance Details Used in the Prompts:

- **Positive:**

Positive appearance details prompt is as follows:

Man: Tall, fit, Short black neatly styled hair, Well-groomed stubble, Deep dark eyes, Warm medium brown skin tone, Fitted black button-up shirt with sleeves rolled up, Tailored beige-black pants, Black leather watch, Upright but relaxed posture, Realistic skin texture with natural highlights and shadows

Woman: Medium height, fit, Long wavy auburn hair neatly styled, Soft hazel eyes, Fair skin tone, Flowy pink summer dress with delicate floral embroidery, Fine texture and natural draping in the dress, Small silver pendant necklace, Subtle and natural makeup, Soft confident smile, Relaxed and comfortable demeanor

Environment/Scene: Outdoor park setting with soft, diffused daylight, Tall trees with textured bark, Well-maintained green grass, natural dirt pathways, Calm lake with gentle ripples in the background, Subtle depth of field for a professional portrait composition, Realistic atmospheric perspective, Soft and even lighting

- **Negative (*):**

Worst quality, low quality, blurry, pixelated, Unrealistic, CGI, cartoonish, anime, painting, sketch, overprocessed, artificial skin texture, plastic-looking, Overexposed, underexposed, oversaturated, extreme contrast, neon colors, lens flare, chromatic aberration, Extra limbs, disfigured, asymmetrical face, missing fingers, low-detail hands, Unnatural expressions, exaggerated smiles, extreme emotions, awkward posture, stiff posing, Cluttered background, distracting elements, busy composition, fisheye distortion, poor framing, Incorrect anatomy, incorrect eye reflections, overdone makeup, glossy skin

**To avoid distortions, anomalies, ect.*

Tools and Models Used:

- **Model Name:**

Indecent

- **Base Model:**

Pony SDXL- for photorealistic outputs

- **Sampling Method:**

DPM++ 3M SDE Exponential for smooth, high-detail rendering

- **Steps:**

Used **45** steps (higher than the recommended 25) for finer details and reduced artifacts

- **CFG Scale:**

7.0 to maintain a balance between prompt adherence and natural realism

Steps Taken to Ensure Maximum Realism:

- **High-Quality Model Selection:**

Used a photorealistic model that someone developed for their own needs and uploaded at [Civitai.com](https://civitai.com) for open source work.

- **Detailed Prompting**

Included clear descriptions of facial features, clothing, lighting, and background.

- **Balanced CFG Scale**

Kept CFG around **5-7** to avoid over-stylization or distortion.

- **Appropriate Sampling Method**

Used **DPM++ 2M SDE Exponential** for smooth, detailed results.

- **Higher Step Count**

Used **45** steps, instead of the recommended **25** so it can be refined better.

- **Face & Hand Detailer**

Used **bbox/face_yolov8s.pt** and **bbox/hand_yolov8s.pt** model for face and hands correction. It is common with models

Generated Images as well as .json for the ComfyUI workflow are provided as attachments.