

Sweetnbrothers

박사무엘, 남궁맑음, 강동훈, 김아진, 정양섭, 지주영



- 사용자의 image를 받아 프로필 image가 나오는 것이 목표.
- Image to Image AI 모델과 MVP 데모 만들기

Architecture

DE

 **gradio**
127.0.0.1

DS



127.0.0.1:7869



Stable Diffusion



192.168.0.7:7860

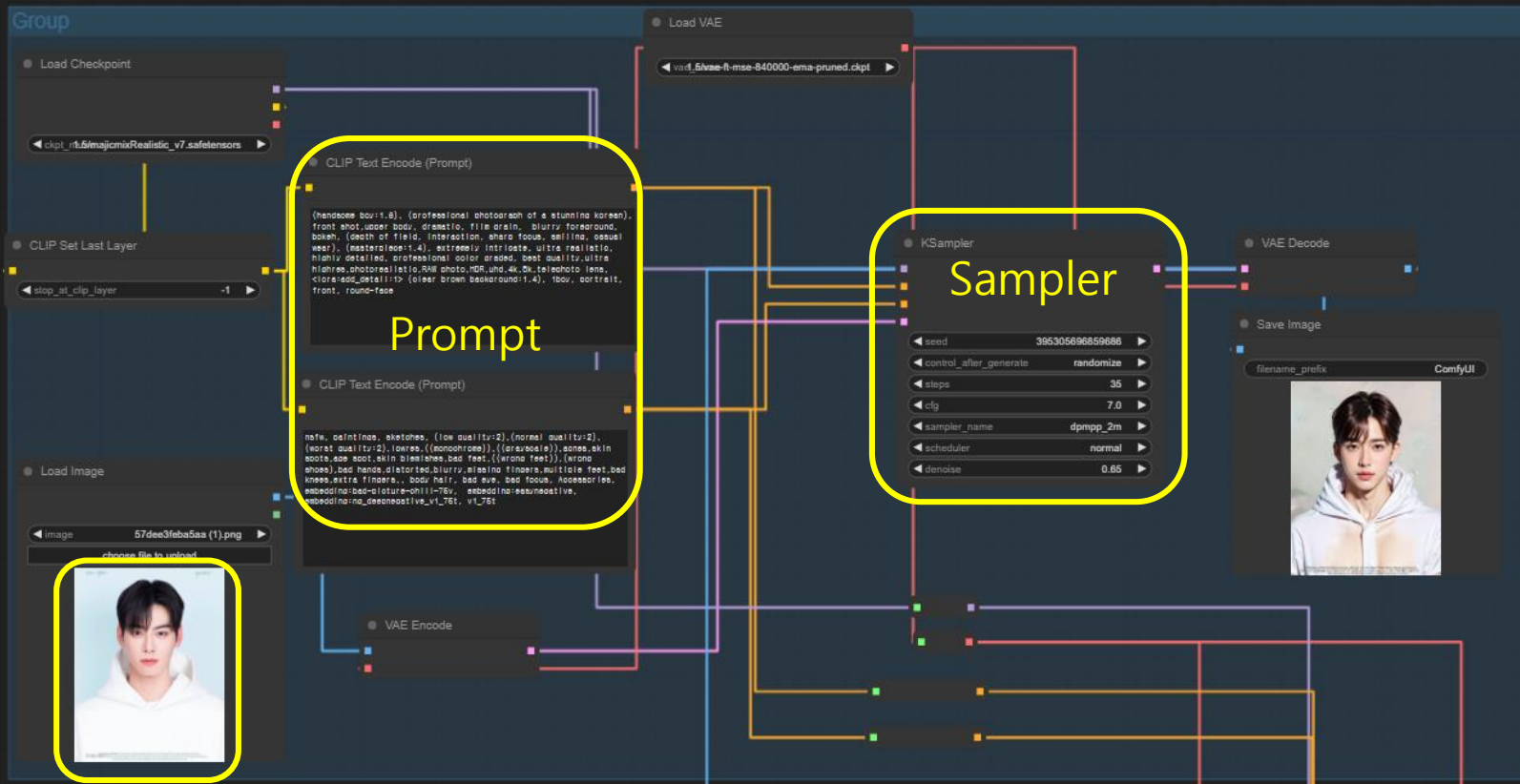


Flask

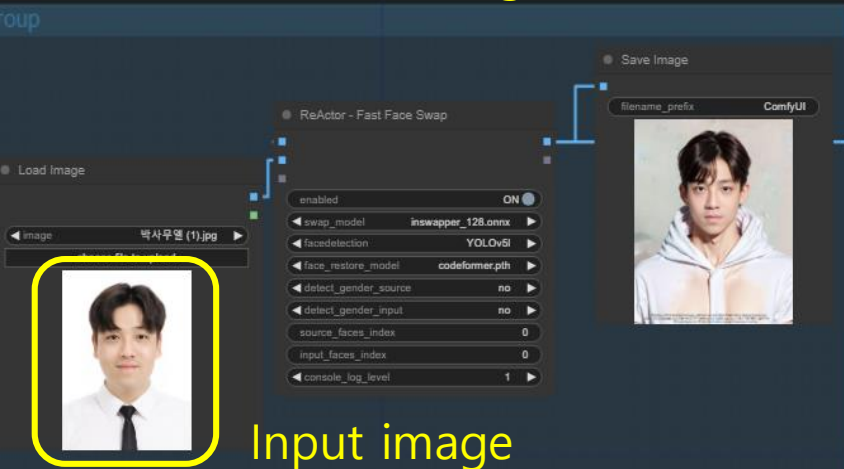
web development,
one drop at a time

DS

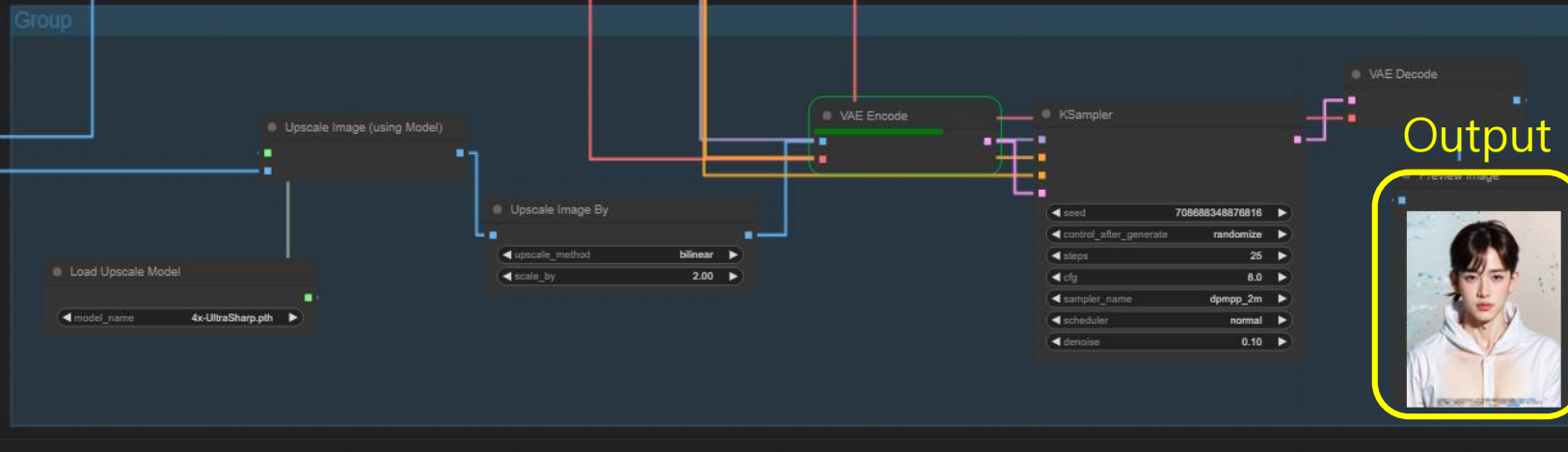
박사무엘, 강동훈, 지주영



참조 image



Input image



Output

Model Process

I2I Model

(Face Swap Model)



input Image



참조 Img

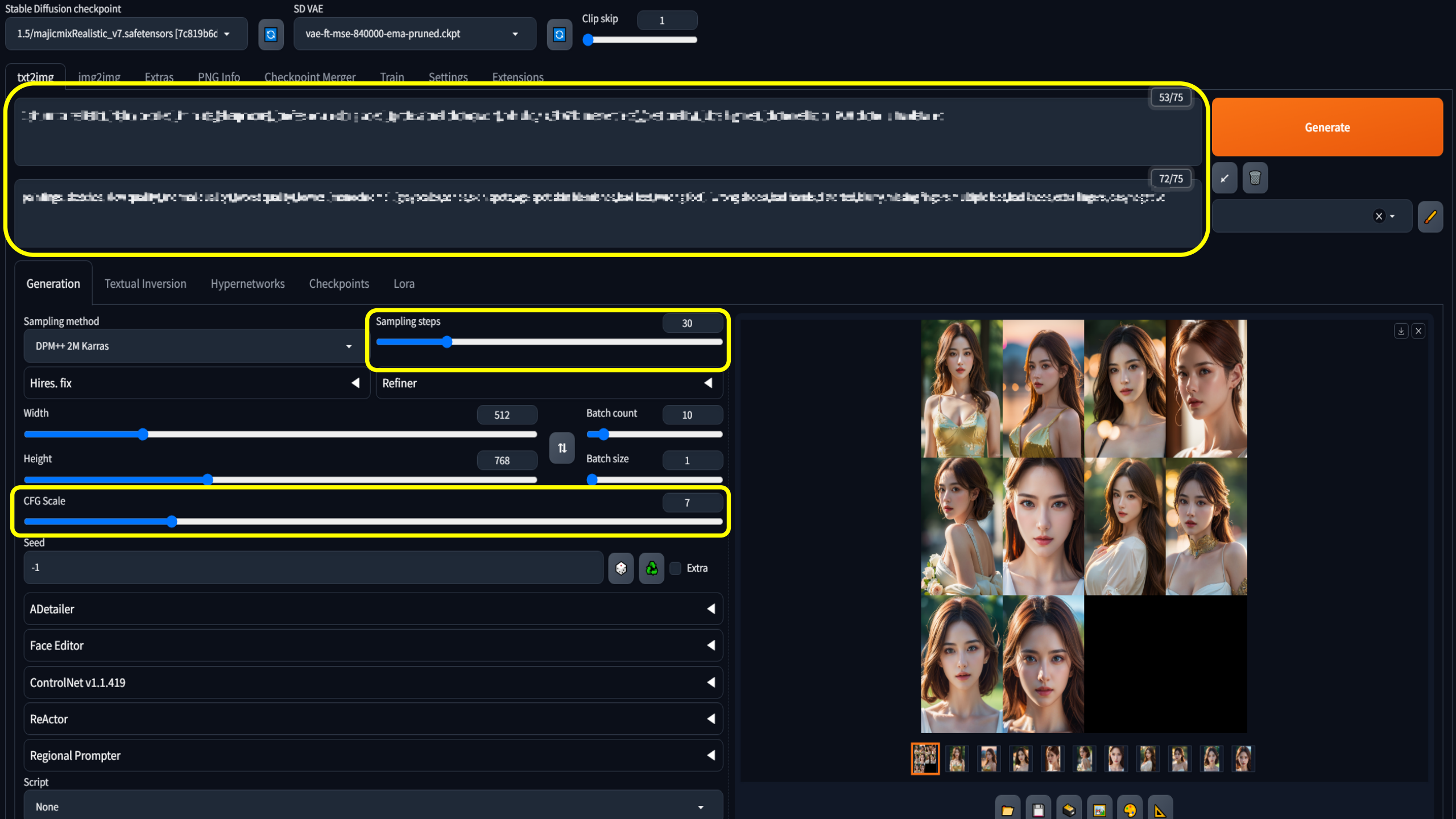


output Image

prompt = f"({gender1}:2), (professional photograph of a stunning korean), front shot,upper body, dramatic, film grain, blurry foreground, bokeh, (depth of field, interaction, sharp focus, smiling, casual wear), (masterpiece:1.4), extremely intricate, ultra realistic, highly detailed, professional color graded, best quality, ultra highres, photorealistic, RAW photo, HDR, uhd,4k, 8k, 222222222222222222222222telephoto lens,<lora:add_detail:1>, (clear brown background:1.4), {gender2}, portrait, front"

```
** gender1 = "handsome male" / gender2 = "1boy"
```

```
negative_prompt = "nsfw, paintings, sketches, (low quality:2),(normal quality:2),(worst quality:2),lowres,((monochrome)), ((grayscale)),  
acnes, skin spots,age spot, skin blemishes,bad feet, ((wrong feet)), (wrong shoes), bad hands,distorted, blurry, missing fingers, multiple  
feet, bad knees, extra fingers, body hair, bad eye, bad focus, Accessories, bad-picture-chill-75v, easynegative, ng_deepnegative_v1_75t"
```



DE

남궁맑음, 김아진, 정양섭


```

import numpy as np
import gradio as gr
import requests
import cv2
import base64
import io
import json
from PIL import Image, PngImagePlugin

url = "http://192.168.0.7:7860"

# 이미지 생성 하는 함수 아식 API가 구현이 되지 않았으므로 셰피아 필터로 구현
def i2i(img , select_model , gender):
    _, bytes = cv2.imencode('.png', img)
    image_code = base64.b64encode(bytes).decode('utf-8')
    params = {
        "init_images" : [image_code],
        "gender" : gender
    }
    res = requests.post(f"{url}/i2i", data=json.dumps(params))
    response_data = res.json()['images']
    image = Image.open(io.BytesIO(base64.b64decode(response_data.split(",")[0])))
    return image

# gradio blocks layout사용
with gr.Blocks() as demo:
    gr.Markdown("Profile Image demo")

    # 이미지 탭 주후에 다른 탭들 추가 가능
    with gr.Tab("Image"):
        image_input = gr.Image()
        image_output = gr.Image()
        image_button = gr.Button("Create")

    # 세부 옵션
    with gr.Accordion("Option" ,open = False):
        select_model = gr.Dropdown(["first", "second", "third"], type="value",value="second",label = "model",interactive =True)
        gender = gr.Radio(["man", "woman"], type="value" , value="woman",label="gender",interactive=True)

    image_button.click(i2i, inputs=[image_input,select_model,gender], outputs=image_output)

# 로그인창을 거쳐가게 한다.
if __name__ == "__main__":
    demo.launch(auth=("admin","admin"))

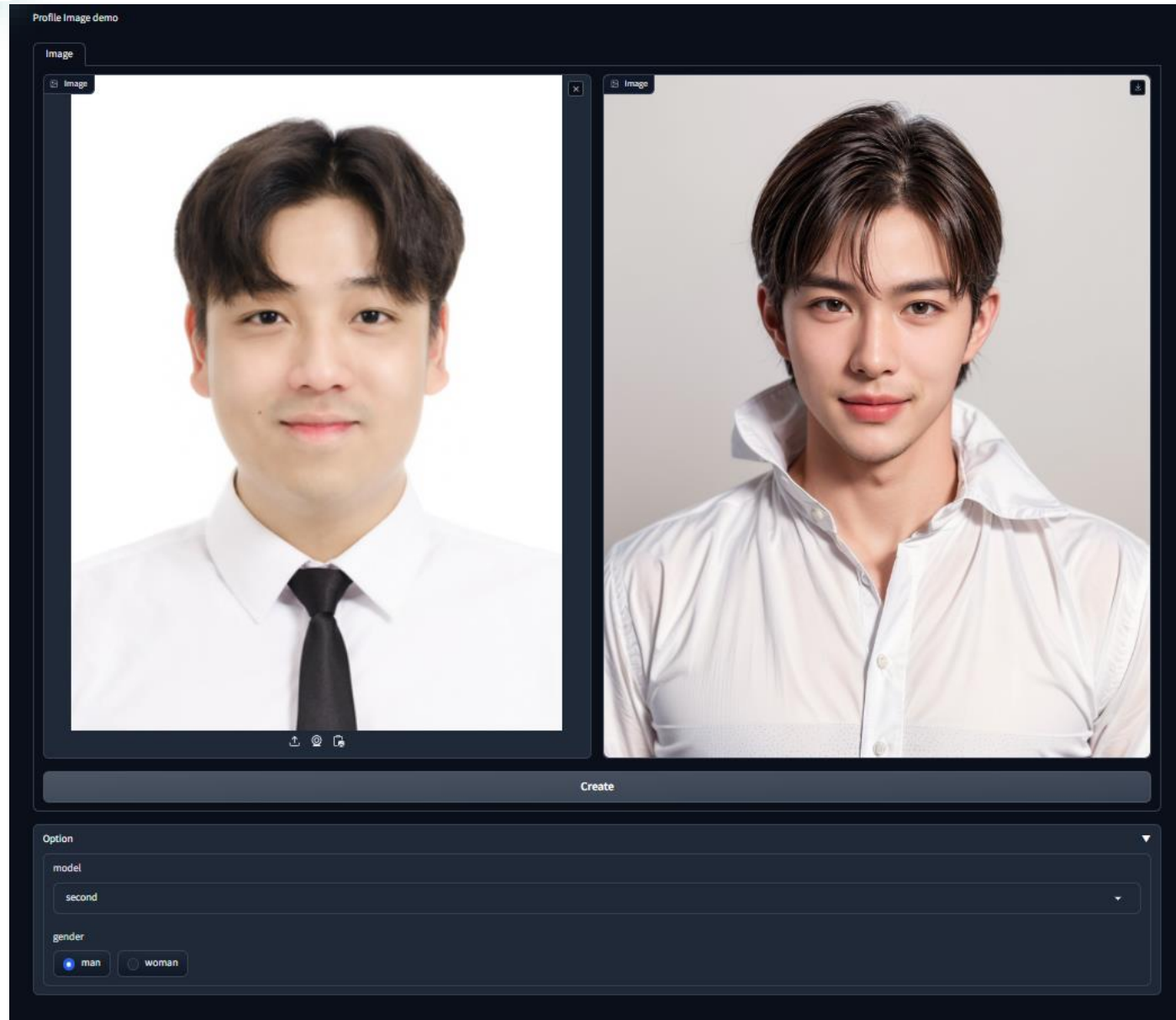
```

블록 레이아웃

탭

옵션 바 (Dropdown, radio)

Model Process



Login

username

admin

password

Login

Login Page (DE Server)

추가 진행상황



- 로그인 기능
- 회원가입 기능
- 회원 로그 분석을 위한 시각화



Apache
Airflow

– 배치 대체

```

export MODEL_NAME="segmind/SSD-1B"
export VAE_NAME="madebyollin/sdx1-vae-fp16-fix"
export DATASET_NAME="/home/cora3/vscode_project/SweetBrothers/kohya_ss/images

accelerate launch train_text_to_image_lora_sdx1.py \
  --pretrained_model_name_or_path=$MODEL_NAME \
  --pretrained_vae_model_name_or_path=$VAE_NAME \
  --dataset_name=$DATASET_NAME --caption_column="text" \
  --resolution=1024 --random_flip \
  --train_batch_size=1 \
  --num_train_epochs=2 --checkpointing_steps=500 \
  --learning_rate=1e-04 --lr_scheduler="constant" --lr_warmup_steps=0 \
  --mixed_precision="fp16" \
  --seed=42 \
  --output_dir="sd-pokemon-model-lora-ssd" \
  --validation_prompt="cute dragon creature" --report_to="wandb" \
  --push_to_hub

```

내가 원하는 데이터 셋에 `write(f'{"file_name": "{filename}", "text": "iom, {list_str}"}\n')` 와 같 'iom' 같은 의미없는 특정 keyword를 공통적으로 추가하여 LoRA를 호출 가능하게끔 하는 것이 중요

The screenshot shows the Kohya SS GUI with the 'Tagger' tab selected. The 'Batch from directory' section is active, showing the input directory and output directory. The 'Interrogate' button is highlighted. The 'Ratings and included tags' section shows a list of tags and their confidence scores. The '1girl' tag is highlighted with a red box.

Move visible tags to keep tags

Move visible tags to exclude tags

Multi string search: part1, part2.. (Enter key to update)

Ratings and included tags | Excluded tags | Gallery

1girl, solo, realistic, black hair, looking at viewer, parted lips, portrait, black eyes, hair ornament, lips, japanese clothes, kimono, grey background, long hair, brown hair, nose, eyelashes, white background, closed mouth, simple background, expressionless, forehead, star (symbol), headband, hairband, teeth, brown eyes, profile, from side, makeup, flower, blurry, glasses, colored skin, pale skin, parted bangs, bangs, smile, upper body, blunt bangs

Send to txt2img **Send to img2img**

Rating confidences

general

Tag	Confidence
general	73%
sensitive	28%
questionable	0%
explicit	0%

Tag confidences

1girl

Tag	Confidence
1girl	99%
solo	98%
realistic	83%
black hair	76%
looking at viewer	72%
portrait	71%
long hair	68%
lips	66%
black eyes	53%
parted lips	28%
closed mouth	24%
nose	22%
simple background	14%
hair ornament	12%

감사합니다.