

Project Title: AI-Based Text-to-Image Generator

Description

Ye project HuggingFace aur Stable Diffusion model ka use karta hai jisme aap text jaise ("A mango on table") daalte ho aur model us text ke baad image generate karta hai.

Technologies Used:

HuggingFace Diffusers

PyTorch

Transformers

Matplotlib

Google Colab/Jupyter

```
# STEP 1: Install necessary libraries (if not already installed)
# Run this in a Jupyter cell
!pip install diffusers transformers accelerate scipy safetensors matplotlib

# STEP 2: Import required libraries
from diffusers import StableDiffusionPipeline
import torch
import matplotlib.pyplot as plt

# STEP 3: Load the model (with float32 for CPU)
pipe = StableDiffusionPipeline.from_pretrained(
    "runwayml/stable-diffusion-v1-5",
    torch_dtype=torch.float32,          # ✅ Required for CPU
    use_safetensors=True
).to("cpu")                          # ✅ Run on CPU

# STEP 4: Generate Image
prompt = "A futuristic city at sunset, cyberpunk style, ultra detailed"
image = pipe(prompt).images[0]

# STEP 5: Show Image
plt.imshow(image)
plt.axis("off")
plt.title("Generated Image")
plt.show()
```

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Attempting uninstall: nvidia-nvjitlink-cu12
Found existing installation: nvidia-nvjitlink-cu12 12.5.82
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/usr/local/lib/python3.11/dist-packages/huggingface_hub/utils/_auth.py:94: UserWarning:
The secret `HF_TOKEN` does not exist in your Colab secrets.
To authenticate with the Hugging Face Hub, create a token in your settings tab (https://huggingface.co/settings/tokens), set it as secret
You will be able to reuse this secret in all of your notebooks.
Please note that authentication is recommended but still optional to access public models or datasets.
warnings.warn(
model_index.json: 100% 541/541 [00:00<00:00, 33.9kB/s]

Fetching 15 files: 100% 15/15 [01:26<00:00, 6.53s/it]

model.safetensors: 100% 492M/492M [00:06<00:00, 91.3MB/s]

preprocessor_config.json: 100% 342/342 [00:00<00:00, 7.49kB/s]

config.json: 100% 617/617 [00:00<00:00, 9.42kB/s]

merges.txt: 525k/? [00:00<00:00, 1.35MB/s]

config.json: 4.72k/? [00:00<00:00, 84.5kB/s]

special_tokens_map.json: 100% 472/472 [00:00<00:00, 8.74kB/s]

scheduler_config.json: 100% 308/308 [00:00<00:00, 4.78kB/s]

model.safetensors: 100% 1.22G/1.22G [00:35<00:00, 42.4MB/s]

config.json: 100% 743/743 [00:00<00:00, 8.91kB/s]

tokenizer_config.json: 100% 806/806 [00:00<00:00, 7.65kB/s]

vocab.json: 1.06M/? [00:00<00:00, 1.83MB/s]

config.json: 100% 547/547 [00:00<00:00, 6.04kB/s]

diffusion_pytorch_model.safetensors: 100% 3.44G/3.44G [01:24<00:00, 45.9MB/s]

diffusion_pytorch_model.safetensors: 100% 335M/335M [00:12<00:00, 39.6MB/s]

Loading pipeline components...: 100% 7/7 [00:02<00:00, 2.60it/s]

100% 50/50 [28:19<00:00, 31.82s/it]

```

Generated Image



