

Assessment 1

1. I used BERT as open source LLM

Language:	english
Context:	The Great Barrier Reef is the world's largest coral reef system, located in the Coral Sea, off the coast of Queensland, Australia. It is composed of over 2,900 individual reefs and 900 islands stretching over 2,300 kilometers. The reef supports a wide diversity of life, including many vulnerable or endangered species. It is a popular destination for tourists, attracting millions of visitors annually, and is also considered one of the Seven Natural Wonders of the World. However, the reef is under threat from climate change, coral bleaching, and overfishing.
Question:	What makes the Great Barrier Reef significant?
<input type="button" value="Get Answer"/>	
Answer: The reef supports a wide diversity of life,	

Language:	bangla
Context:	বাংলাদেশের রাজধানী ঢাকা। ঢাকা বাংলাদেশের সবচেয়ে বড় শহর এবং এর অর্থনৈতিক কেন্দ্র।
Question:	বাংলাদেশের রাজধানী কি?
<input type="button" value="Get Answer"/>	
Answer: রাজধানী ঢাকা। ঢাকা বাংলাদেশের সবচেয়ে বড় শহর এবং এর অর্থনৈতিক কেন্দ্র।	

<https://colab.research.google.com/drive/1FEeIWKrWGwLQ45nQpORSQYDATn1x1DXi?usp=sharing>

Assessment 2

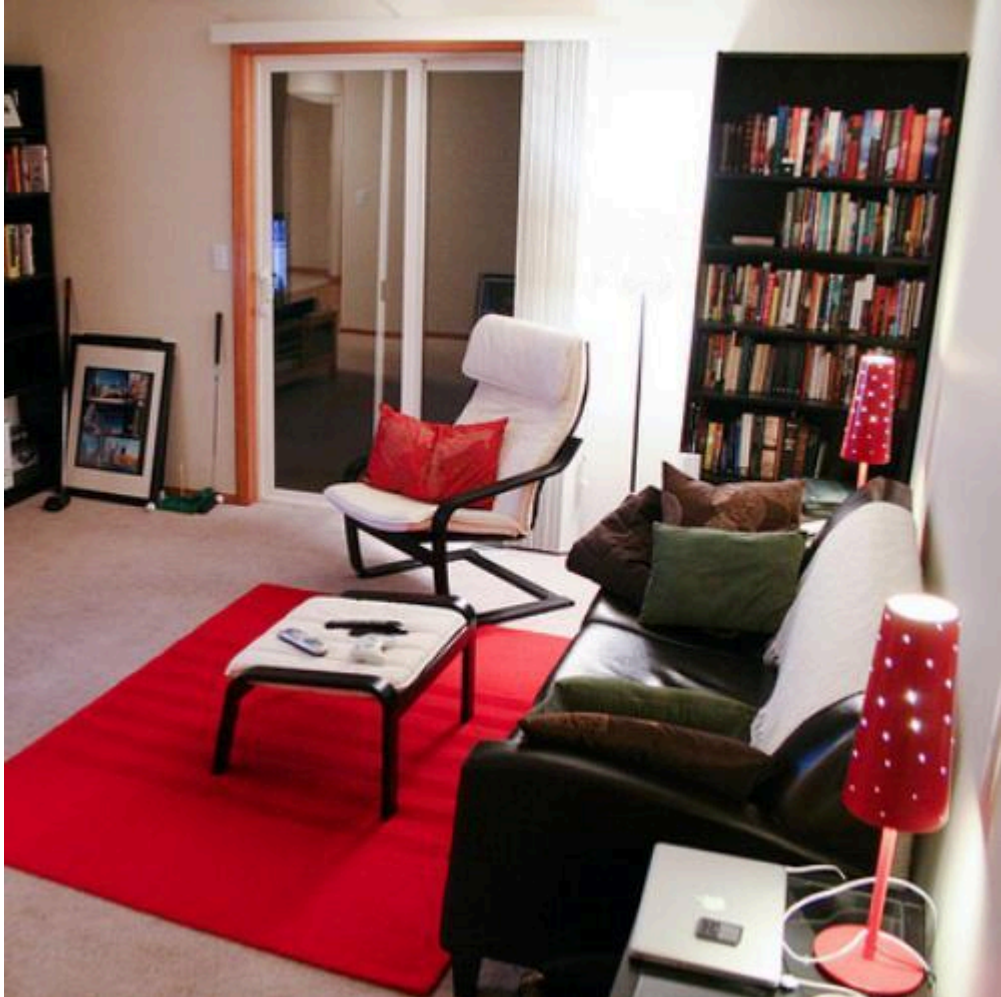
I fine-tuned the Stable Diffusion Img2Img model for image-to-image generation using my custom dataset (MagicBrushDataset).

I trained the UNet, VAE, and Text Encoder components, adjusting their weights to better transform source images into target images.

The model was adapted to perform image-to-image translation, learning to generate target-like images from source images.

I used a lightweight Stable Diffusion model, allowing for faster training and inference while still generating high-quality results.

The model was fine-tuned on my dataset while leveraging the pre-trained Stable Diffusion weights to specialize in the image transformation task.



This is the image i provided and the prompt was "change the table for a dog". As i took very less data to train so the model wasnt performing well. It produced this image Unfortunately!

I used MagicBrush dataset from hugging face.

Used AutoPipelineForImage2Image and
stable-diffusion-v1-5/stable-diffusion-v1-5



<https://colab.research.google.com/drive/1jrWpVvH29l6WrSVpvxKJIBUgP8QLSmoA?usp=sharing>