Project Report of Image Generation Using ControlNet and StableDiffusers

Where the model works well:

- While generating images the generational latency for each image is 13.87 sec (average). This is achieved by the use of the right model and correct preprocessing.
- The accuracy of the images generated is promising. These images are clear, visible, meaningful and visually represent what all is mentioned in the prompt. For example, for the prompt: 'beautiful landscape' the image generated is

- While changing the aspect ratio of the image the quality or detailing is not deteriorated. The details and objects are preserved. This is achieved because the elements
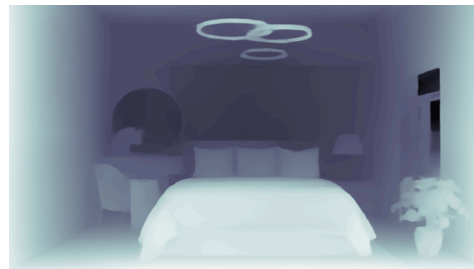
| 1:1 | 16:9 |

Where the model fails:

- The model lacks the ability to crop images which would've helped while preprocessing by removing the unwanted portion of the image. When we resize an image, cropping is required to maintain the features of the image.

- Even though the model accepts any aspect ratio, when it processes the image of that dimension, depending on the value of the aspect ratio, parts of the images are either stretched, squeezed or cut off which even reduces visual appeal.

  We can improve this by: If we can implement automated aspect ratio detection which will provide us with the most optimal value of aspect ratio for the image, it will prevent any feature loss.