**HW3 Text Report**

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1. How many images are there in your dataset? And how many matched images are

there in the log.txt file?

**A.**

**4 folders (images, images\_2, images\_4, images\_8) each 301 images.**

**301 matched images in the log.txt file.**

2. If someone wants to create their own NeRF model today, during the data collection stage (recording or taking photos), how would you advise them to make the subsequent model more comprehensive?

**A.**

**1. Capture diverse angles around the subject, covering a 360-degree view if possible.**

**2. Ensure consistent lighting to minimize variations in illumination that could affect model training. Also reduce reflections etc. glasses, computer screens.**

**3. High-resolution images provide more detail, which can lead to better-quality outputs.**

3. Try to understand PSNR and SSIM and explain the terms in your own words.

**A.**

**PSRN:** **Measures the quality of a reconstructed image by comparing it to the original image. Higher PSNR values indicate the reconstructed image is closer to the original, meaning better quality with less noise.**

**SSIM: Measures the perceived similarity between two images, focusing on structural information, luminance, and contrast. It ranges from -1 to 1, where values closer to 1 indicate higher similarity.**

4. Please provide a link to the nerfstudio folder on your cloud drive and grant viewer

permissions for the link.

**A.**

<https://colab.research.google.com/drive/19hmASSxN0Hov4hQy_3tUUavJoTo111XC?usp=sharing>

Colab 跑不動，所以我弄了一個可以跑我自己電腦的GPU的Docker local runtime

但最後面的training 跟rendering 都是在Docker的terminal 中作業，有需要的話也可以再附上dockerfile。

5. (Optional) If you are using the other methods, please describe how to execute it in practice, including relevant commands and code.

**A.**