

Pre-Class Assignment 4

Reading Material 1: **NeRF in the Dark**

Question 1:

What is the input of RawNeRF? What camera parameters (e.g., focal length) can be changed when rendering for RawNeRF?

Reading Material 2: **Ref-NeRF**

Question 2:

Explain equation (11), why it helps produce better normal?

Reading Material 3: **NeuS**

Question 3:

What's the bias problem in NeuS?

Question 4:

How does NeuS solve multiple surface intersections with SDF representation?

Link:

1. <https://bmild.github.io/rawnerf/>
2. <https://dorverbin.github.io/refnerf/>
3. <https://lingjie0206.github.io/papers/NeuS/>

Optional Reading Material:

1. HDR-NeRF
<https://shsf0817.github.io/hdr-nerf/>
2. Volume Rendering of Neural Implicit Surfaces
<https://lioryariv.github.io/volsdf/>