

# Progress Report

This report summarizes the development in the project during 4th Week (5/07/22-12/07/22)

Tasks	Date	Remarks
<ol style="list-style-type: none"><li>1. Read research papers on Pixel-NeRF</li><li>2. Read research papers on MIP-NeRF</li><li>3. Read research papers on state-of-the-art image denoising techniques.</li><li>4. Read paper on hdr-NeRF</li><li>5. Read paper on Deblur-NeRF</li></ol>	Starting from 5/july/2022 to 12/july/2022	Suggestions for new relevant papers required
<ol style="list-style-type: none"><li>1. Implemented and tested the algorithm in the paper Deblur-NeRF.</li></ol>	6/july/2022 - Still going on	Able to reduce the time to train the neural network and optimize the algorithm.
<ol style="list-style-type: none"><li>1. Prepared a template for project description using Latex.</li></ol>	10/july/2022	Template is done
<ol style="list-style-type: none"><li>1. Implemented LPIPS (metric for structural similarity in image processing)</li></ol>	9/july/2022 - 10/july/2022	Implemented the alexnet, vgg16, and squeezeNet neural networks. Testing the metrics is pending and will be mostly completed by 5th week.
<ol style="list-style-type: none"><li>1. Code to fetch the dataset</li></ol>	11/july/2022	Testing the code is pending.

## **General observations**

1. Successfully optimized the core NeRF algorithm to train on a miniature dataset with nearly 80,000 iterations.
2. Successfully tested the algorithm on images containing a basket (in a cluttered scene), a buick car, and a woolen ball.
3. The algorithm generated a sharper video of the scene but still requires further changes to obtain the expected resolution.
4. The algorithm is tested for 80K, 100K, and 60K iterations respectively.