School of Computer Science Engineering and Technology

Course- **BTech**
Course Code- **CSET340**

Type- **Specialization Elective**
Course Name- **Advanced Computer Vision and Video Analytics**

Year- **2026**
Date- **26-30-Jan-2026**

Semester- **EVEN**
Batch- **2023-2027 (VI Sem)**

Lab Assignment No. 3

Exp. No.	Name	CO-1	CO-2	CO-3
1.	To perform Basic Image denoising operations.	✓		

Objective: To perform Basic Image Transformations, Histogram equalization. Perform the provided task as follows.

1. **Compare the different methods to avoid uneven illumination.**
   1.1 Contrast Limited Adaptive histogram equalization. (CLAHE.jpg)
   1.2 Homomorphic Filtering (homomorphic.jpg)
   1.3 Local Gamma Correction (local_gamma.jpg)

2. **Perform the following denoising operations –**
   2.1 Read the image (original_image.jpg), add gaussian noise, remove the noise by gaussian smoothening filter, plot the output as well as histogram.
   2.2 Read the image (original_image.jpg), add Salt and Pepper noise, remove the noise by median filter, plot the output as well as histogram.
   2.3 Read the image (original_image.jpg), add shot noise, remove the noise by Non Local means (N-L means) filter, plot the output as well as histogram.

Note:- **Suggested Platform:** Python: Jupyter Notebook/Visual Studio Code/Google Colab.
Mode of Delivery: Face-to-face: Instructor-led discussion and live coding demonstration. Hands-on Practice via Google Colab/VS code/Notebook.
Submission: On LMS within the prescribed time frame.