

# CSE463 Assignment 1

Submission Link: <https://forms.gle/uwuLNkv4zrpATQnT7>

**Deadline: 9 Nov 11:59PM**

**Fall 2024**

## **Task 1: Create your own grayscale letters and numbers! (10)**

- Take the first letter of your name, and the last two digits of your ID.
- Eg. A student named “Batman” who has the ID “12345678” will create B78

## **Task 2: Create your own dataset. (10)**

1. Choose a specific subject (eg. cat, dog, horse, tree, car, etc) and collect 10 random images from the internet (Dataset1).
2. Perform 5 different transformations shown in class on each of them. In your code, you must explain the logic behind choosing any transformation you use.
3. Finally, create a dataset with Random Noise. Show before and after.
4. Plot a histogram of the result. [1 Histogram!!]

## **Task 3: The Art of Image Collage (10)**

Use your creativity to blend images together and create a unique collage.

### **Instructions:**

1. Choose **5** different images that represent a theme of your choice (e.g., nature, urban, abstract). [The images should be different from Task 2] (Dataset2)
2. Blend the images together using varying alpha values to create a smooth transition between them.
3. Add Gaussian noise to the final collage to simulate a vintage or artistic effect. Show before and after.
4. Plot a Histogram.

### **SUBMISSION instructions:**

- Open a folder in google drive and name it as- ID\_Name\_Lab1
  - a. Create Subfolders for each task. Ie. Task1, Task2, Task3

- i. Upload the images you collected (where applicable, ie. task 2 and3)
  - ii. Upload a PDF consisting the codes & screenshots of the outputs of each code.
- b. Share the link of the folder in the submission form. (**Make sure the folder is accessible(Anyone with the link)**)