CSC-8637(Deep Learning)

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CycleGAN

Data Processing: Separate data preprocessing procedures were used to extract the faces of cats, dogs, and people. Libraries like zipfile, os, and shutil were used to mix the photos of the dog and cat. The dog images in the train folder were used for training while the remainder were utilized for testing after the zip files had been extracted in Colab. Using the os and shutil libraries, 70% of the data for the cat dataset were transferred to the training directory, while the remaining 30% was transferred to the test directory. The photographs of the test dog and cat, as well as the images of the trained dog, were combined. The split of the facial data was 70:30. Following that, these pictures were loaded utilizing the image dataset from the directory method. Since this data did not have explicit labels, the "label" parameter was removed from the preprocessing methods. Once the pre-existing CycleGAN model was loaded, it was run for 50 epochs to generate images that resembled cat or dog faces.

The model was saved and then run again using Marvel Heroes images, and the results were displayed in the notebook.

Modeling: Transfer learning was employed using a pre-trained CycleGAN model.