ML2022-2023 Spring HW03 Report

Public Score	Private Score
0.88600	0.89333

Report Questions

Q1

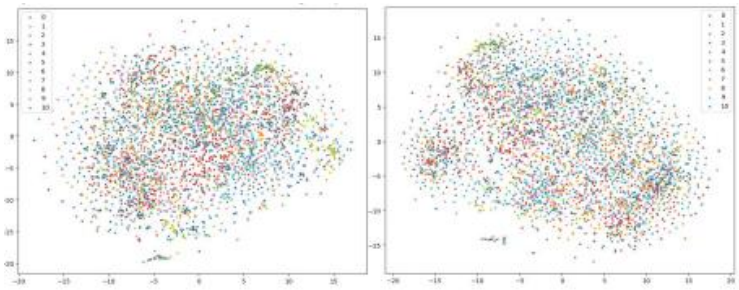
Implement augmentation by finishing train_tfm in the code with image size of your choice.

Answer:

Q2

Visualize the learned visual representations of the CNN model on the validation set byimplementing t-SNE (t-distributed Stochastic Neighbor Embedding) on the output of bothtop& mid layers (You need to submit 2 images).Briefly explain your result of the t-SNE visualization.

Answer:



The t-SNE visualization shows the distribution of learned features from both the mid layer and the top layer of the CNN model in a 2-dimensional space. Each dot represents a sample, and the different colors correspond to different classes. While there is some overlap among the classes, which suggests that the model's learned features are not completely separable, there are still discernible clusters for some classes, indicating that the model has captured some discriminative features. This clustering provides insight into how well the model's mid-level representations separate different classes, which can be useful for further model refinement.