

Report Questions

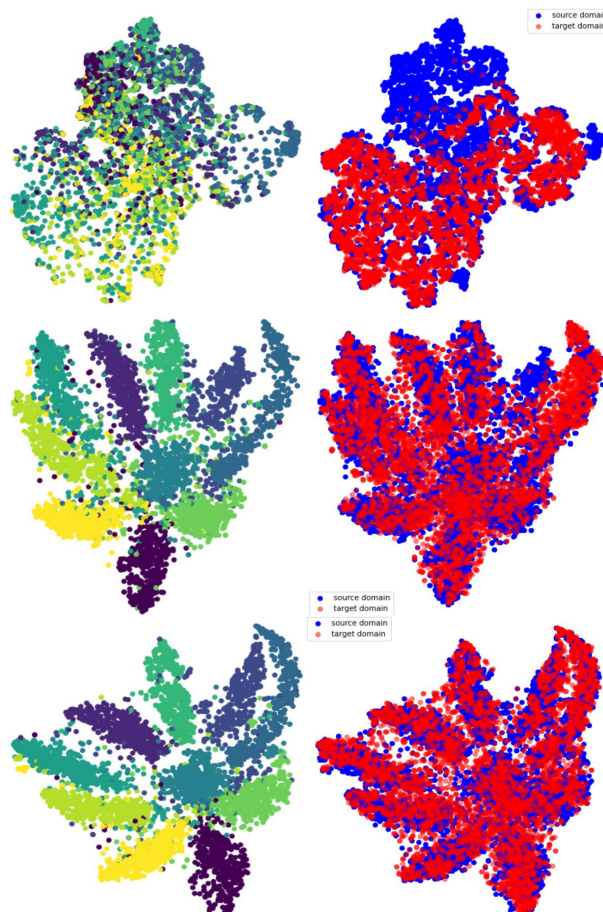
Part 1 Visualize distribution of features accross different classes.

Q1

Please make t-SNE plot the distribution of early, middle, final stage.

- a. Evaluate the model on training dataset, collect features and labels
- b. Make 3 t-SNE plots of the following training phase:
 - i. early stage,
 - ii. middle stage,
 - iii. final stage

Answer:



Q2

Explain and analyze the distribution of features of three stages.

Answer:

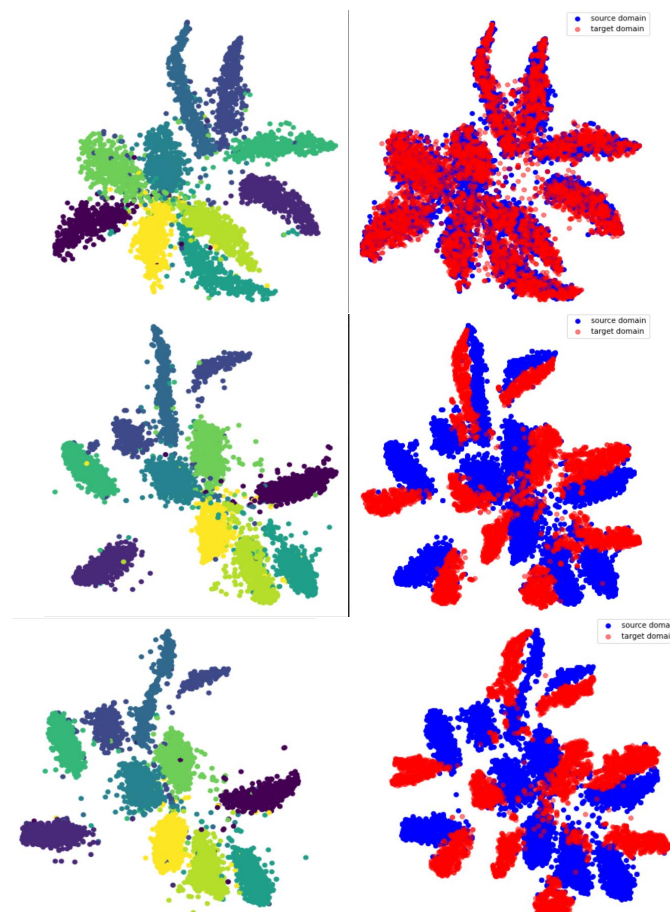
At the 0th epoch, the picture is messy. By the 399th epoch, the classification has become more obvious. The distribution of the target and the distribution of the source are basically consistent, but the edges are still blurry. Finally, at the 999th epoch, the classification has become obvious. , the distribution of target and source is basically the same, achieving the purpose of the DANN model.

Part 2 Visualize distribution of features accross different domains.

Q1

Please make t-SNE plot the distribution of early, middle, final stage.

- Evaluate the model on source dataset and target dataset, collect feature and labels
- Make 3 t-SNE plots of the following training phase:
 - early stage,
 - middle stage,
 - final stage



Q2

Explain and analyze the distribution of features of three stages.

Answer:

From the changes in the T-SNE plot, it can be seen that after three stages of feature extraction, the feature distributions of different categories gradually become clearer, and the distributions of the source and target domains gradually overlap. This indicates that the feature extractor is gradually learning more discriminative and generalized features, which makes the distribution of features in the source and target domains converge and helps the domain adaptation task.