

Label Decoupling and Reconstruction: A Two-Stage Training Framework for Long-tailed Multi-label Medical Image Recognition (Supplementary Materials)

Anonymous Author(s)

1 EXPERIMENTS

In this section, we carried out a visualization experiment to ascertain whether our approach can accurately reconstruct label distributions. Initially, we randomly selected three categories from the Axial Spondyloarthritis Dataset, each with 500 samples. Using the first stage of LDRNet, we extracted class-aware features corresponding to each of these categories. To maintain consistency, for each category, we sampled N instances from the reconstructed Gaussian distributions in the second stage. Finally, we employed t -SNE to

visualize these features. The results, as depicted in Fig. 1, demonstrate a pronounced tendency for the same categories to cluster together. This observation suggests that our reconstructed Gaussian distributions are representative of the category distributions, effectively capturing the inherent structure of the data.

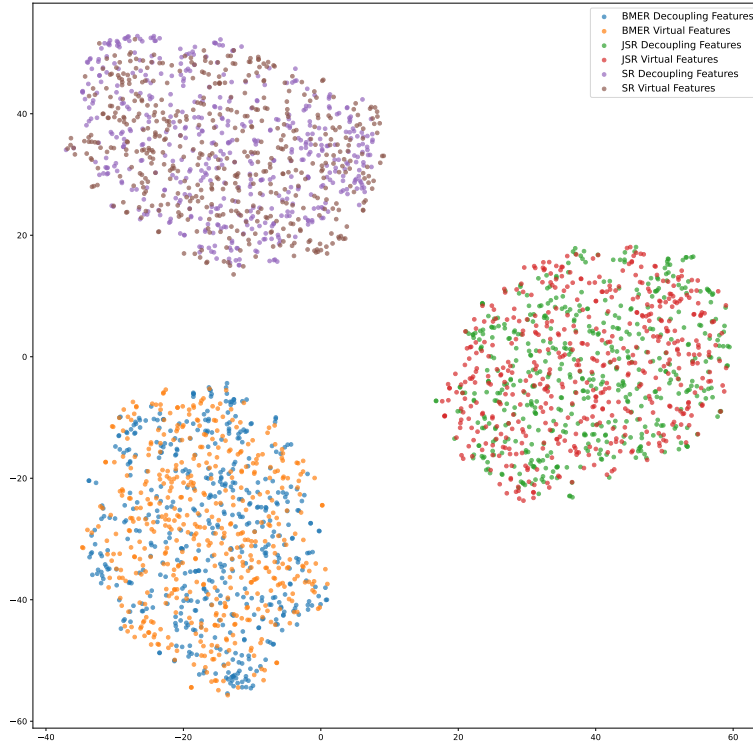


Figure 1: t -SNE visualization of Feature Distributions. The plot in the upper right box illustrates three distinct category pairs. Within each pair, the first category represents the class-aware feature decoupled from the Axial Spondyloarthritis Dataset, while the second category depicts the feature sampled from the reconstructed Gaussian distribution.