

# Supplementary Materials

## Supervised Dimensionality Reduction for the Algorithm Selection Problem

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Below are the 2D visualisations of all the problem instances in the different projection spaces for each of the datasets included.

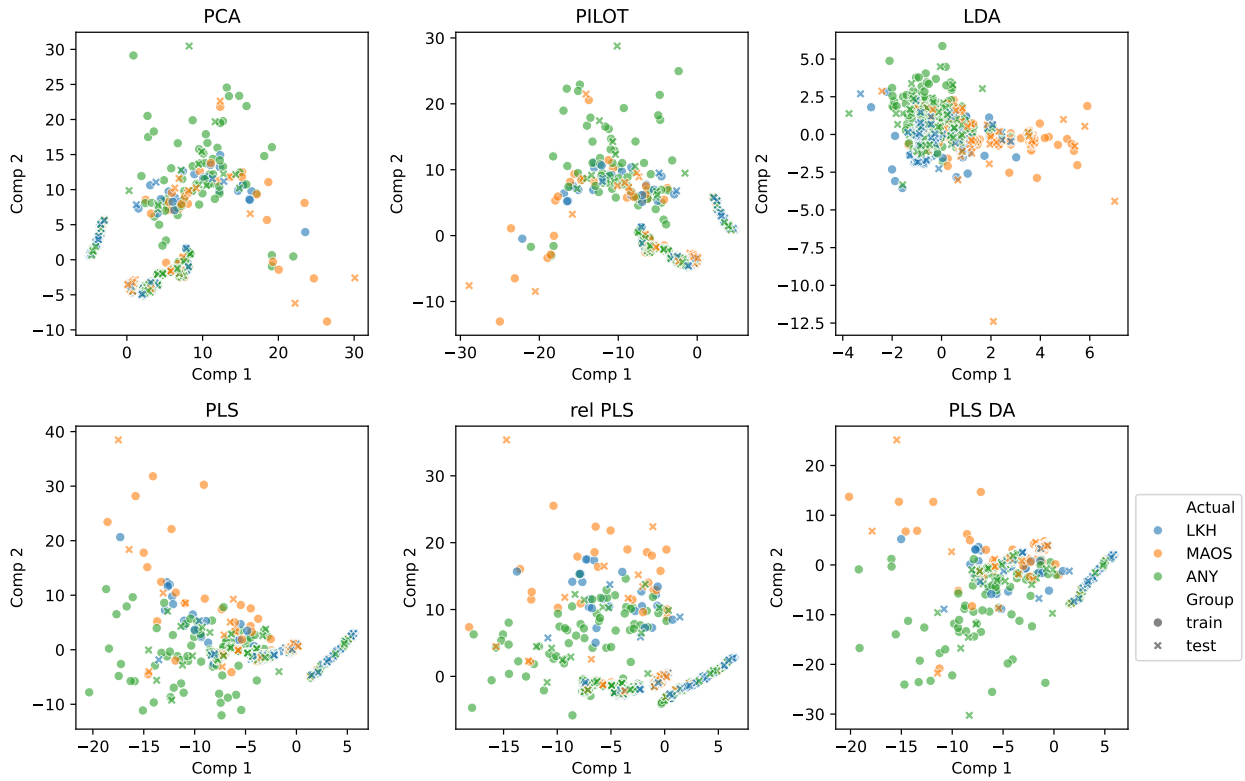


Fig. 1: 2D projections of `tsp60` instance space showing actual best algorithm

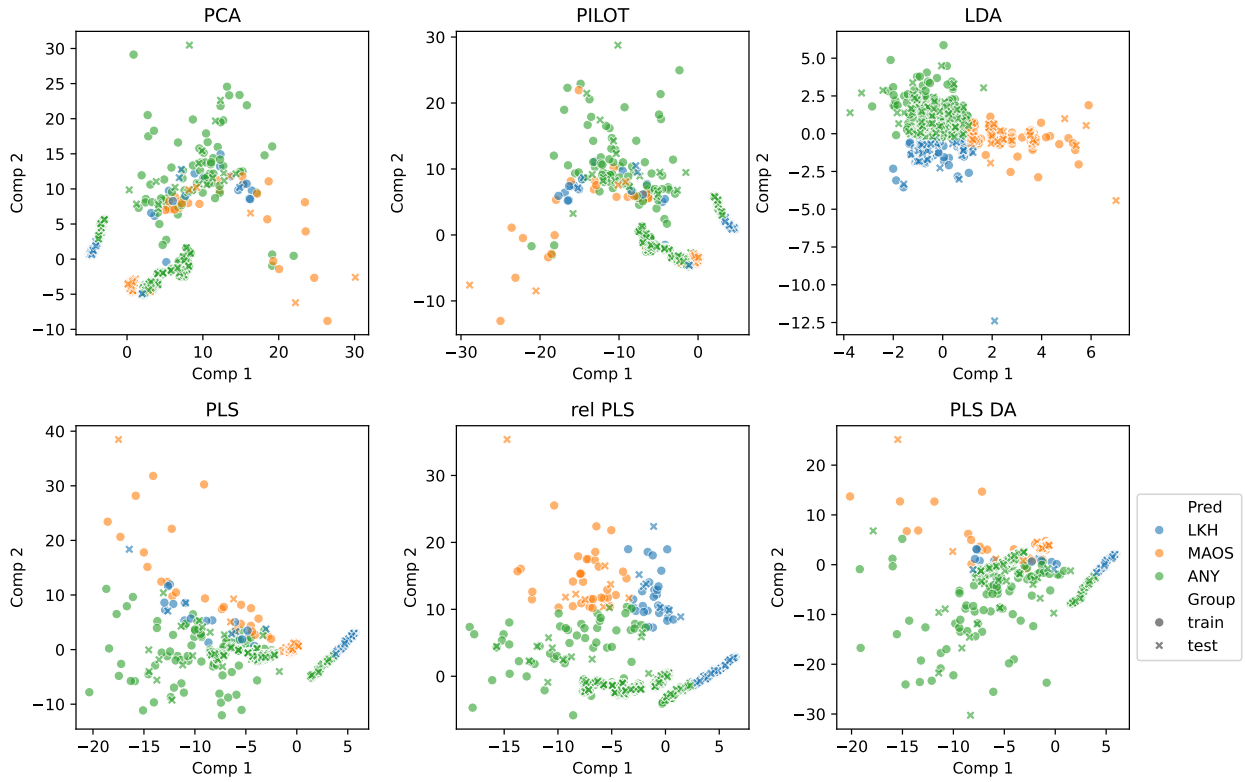


Fig. 2: 2D projections of  $tsp60$  instance space showing predicted best algorithm

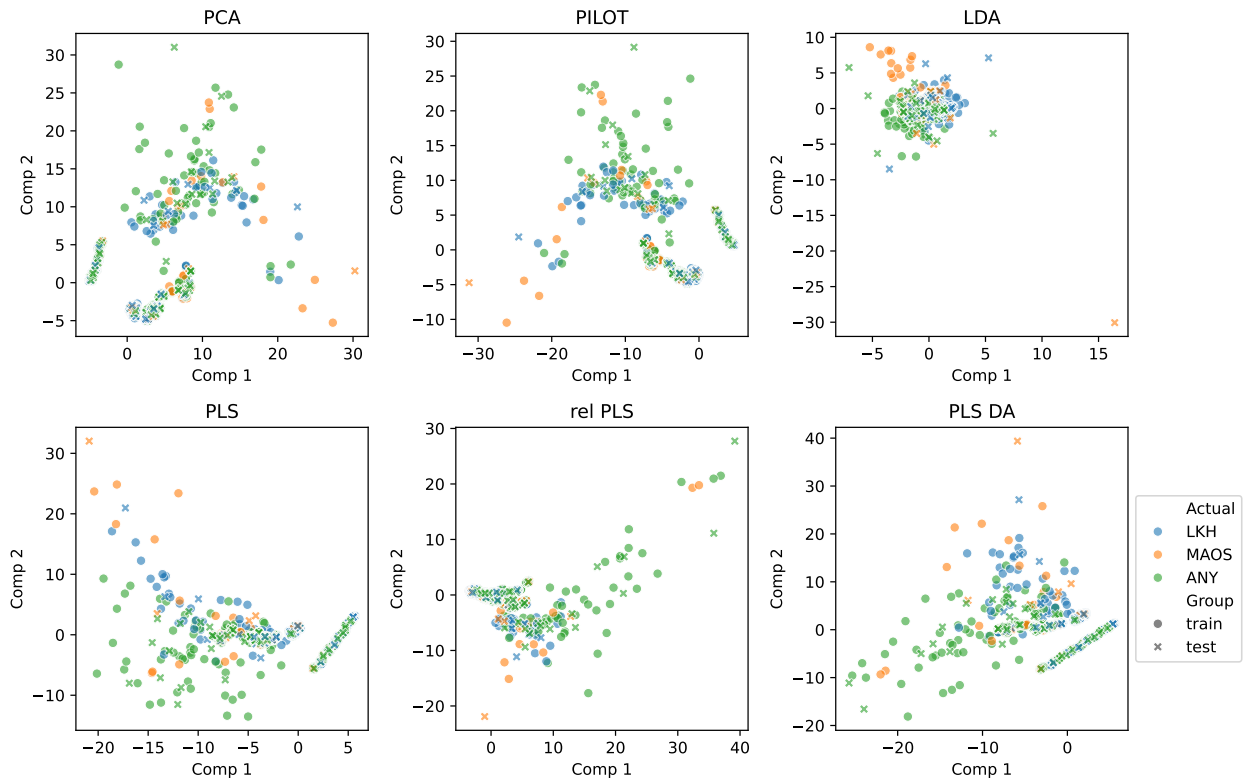


Fig. 3: 2D projections of  $tsp1800$  instance space showing actual best algorithm

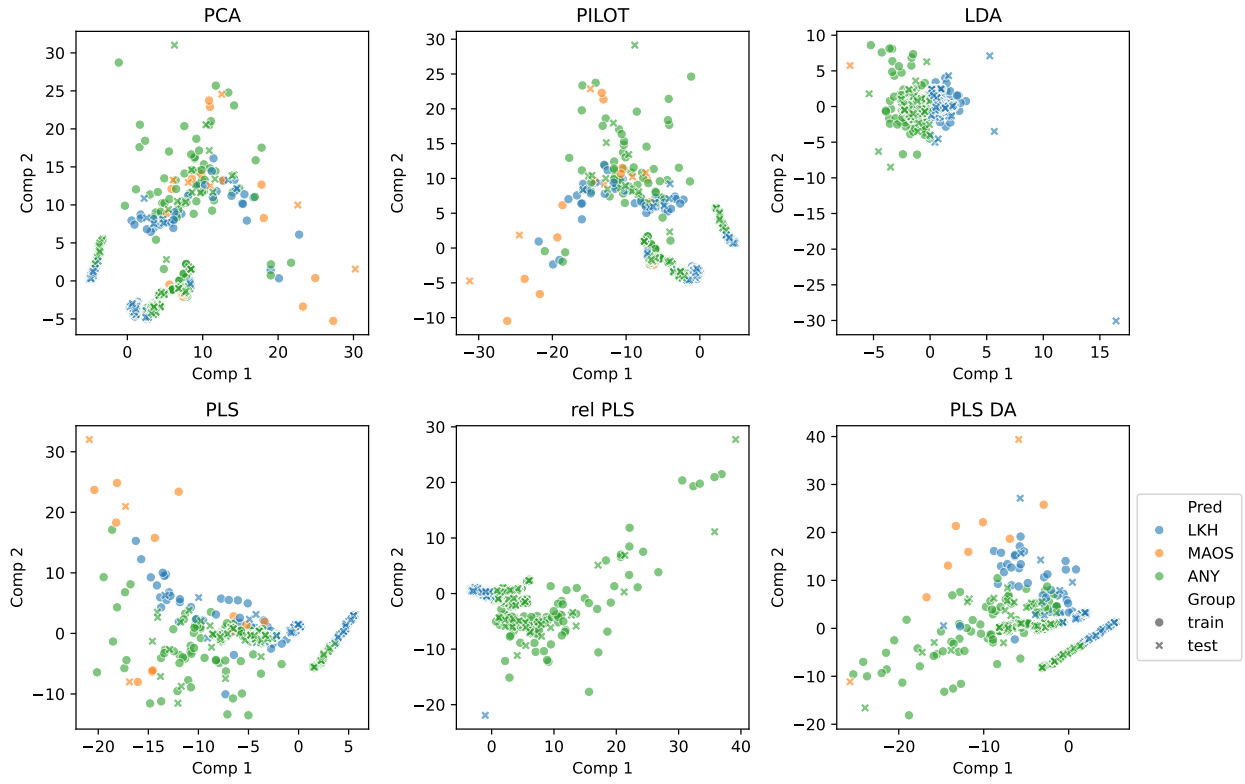


Fig. 4: 2D projections of  $tsp1800$  instance space showing predicted best algorithm

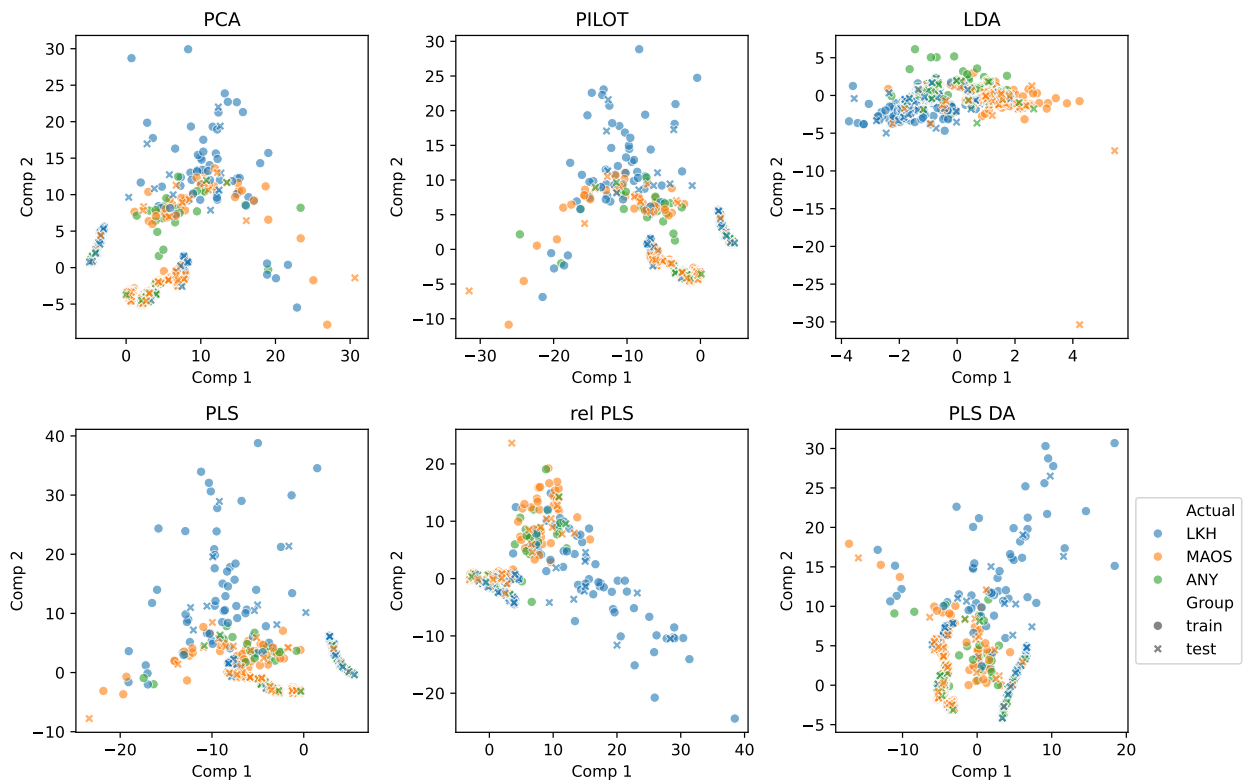


Fig. 5: 2D projections of  $tspWin$  instance space showing actual best algorithm

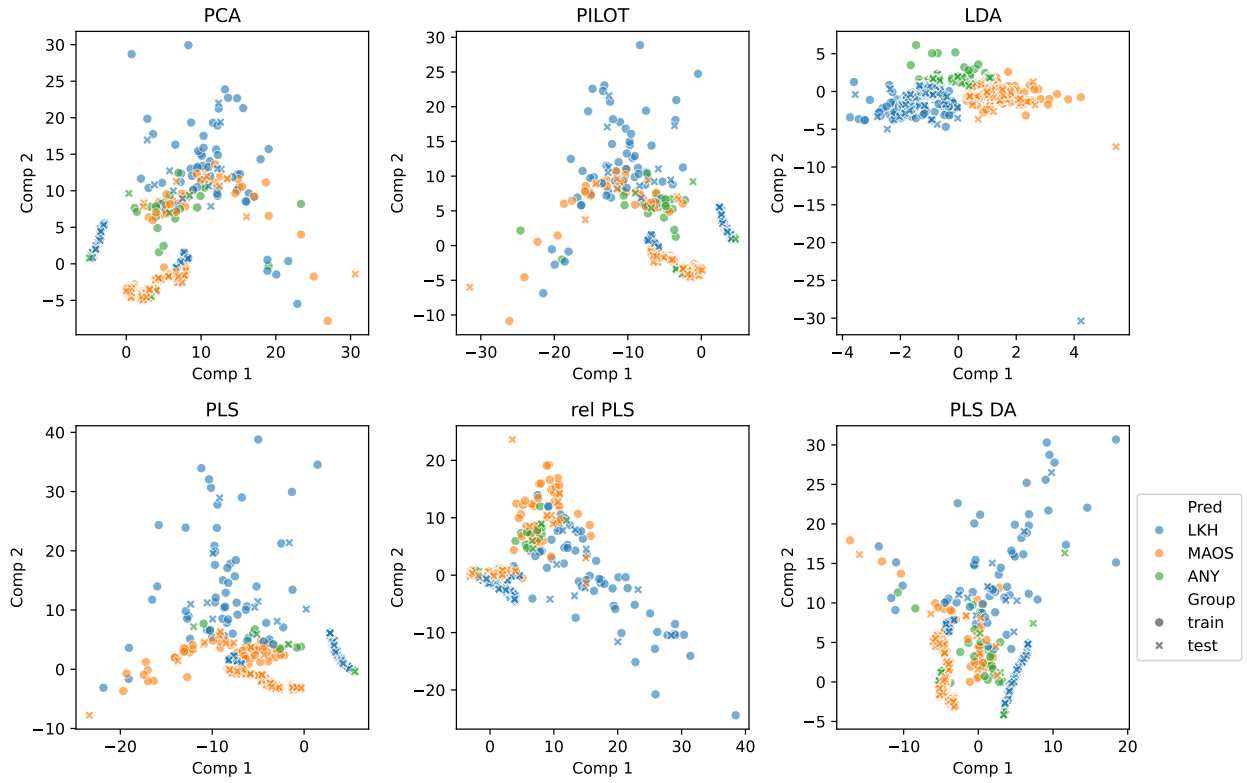


Fig. 6: 2D projections of `tspWin` instance space showing predicted best algorithm

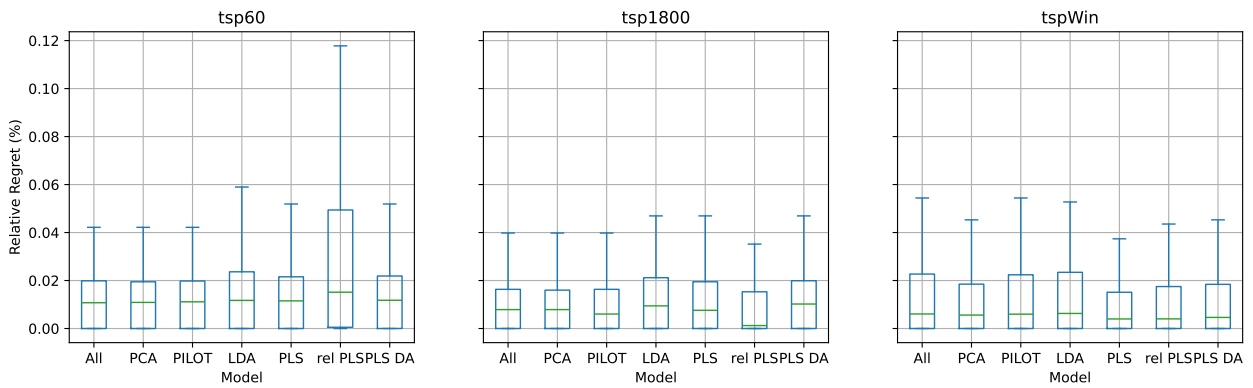


Fig. 7: Distribution of relative regret for misclassified instances from TSP datasets (excluding outliers)

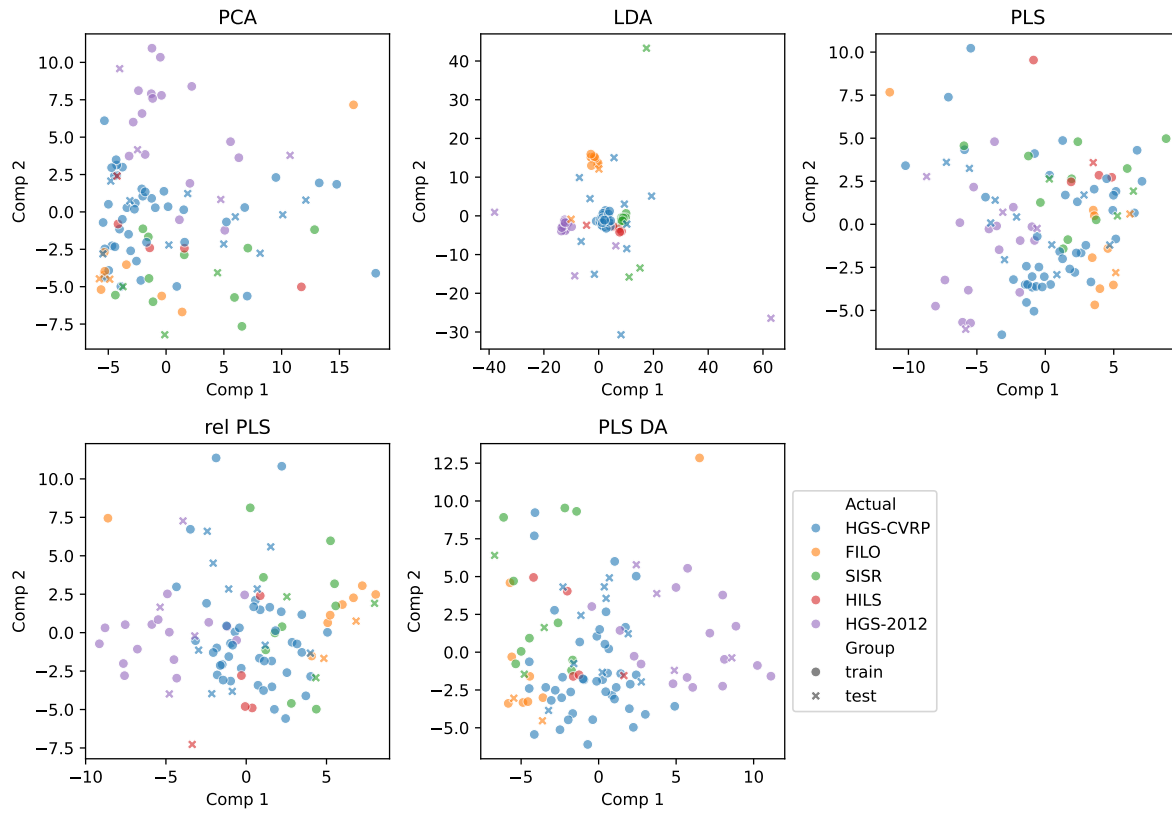


Fig. 8: 2D projections of vrp instance space showing actual best algorithm

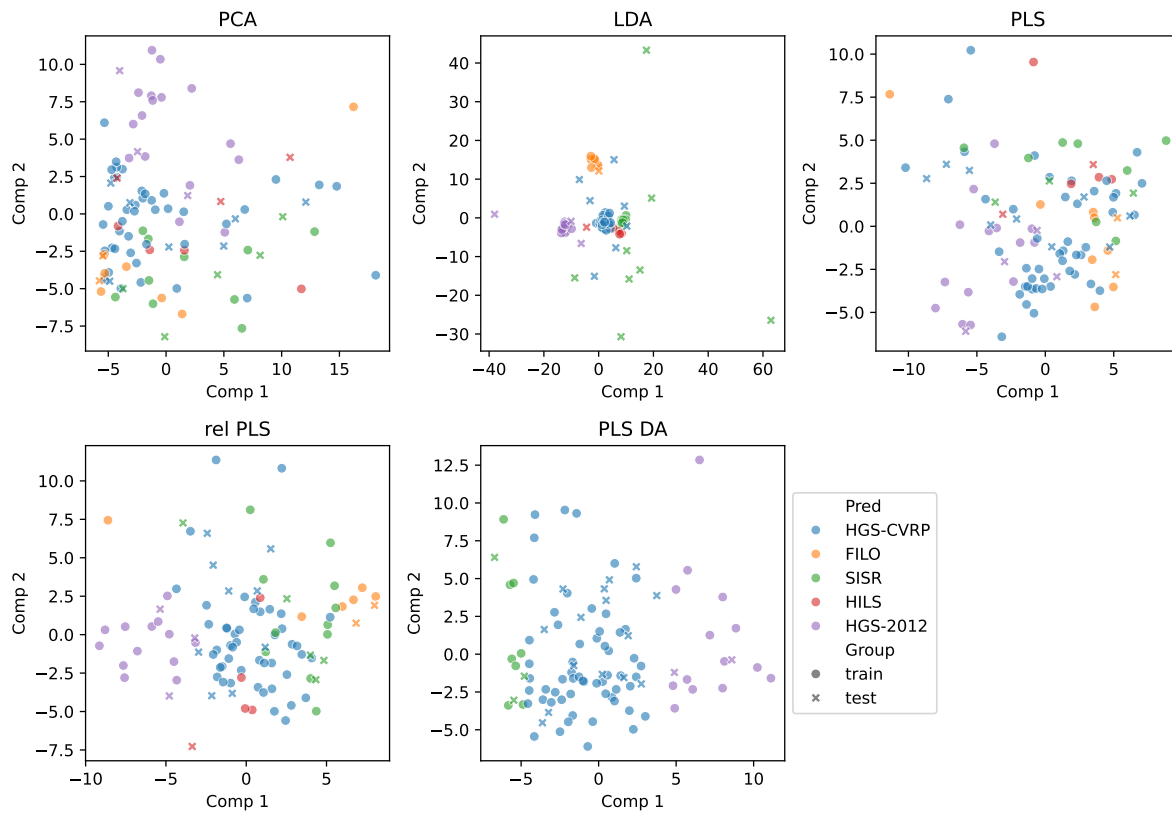


Fig. 9: 2D projections of vrp instance space showing predicted best algorithm

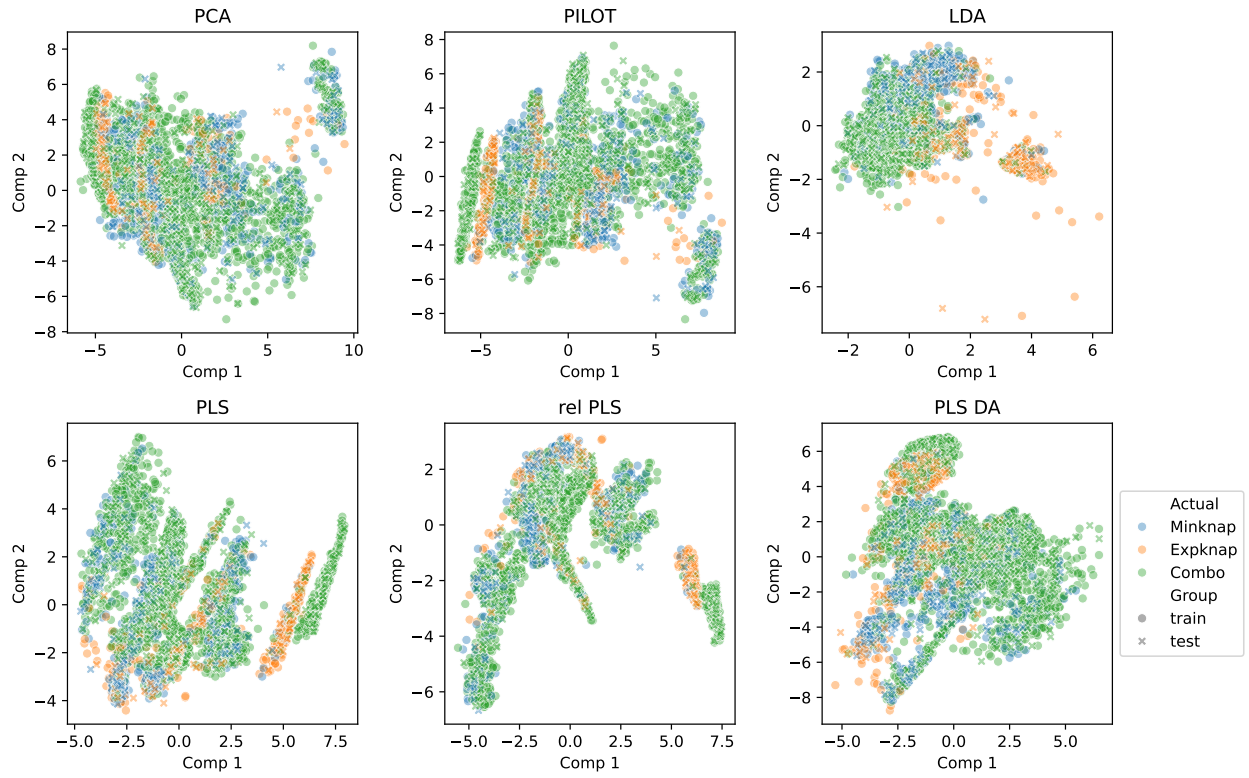


Fig. 10: 2D projections of knapsack instance space showing actual best algorithm

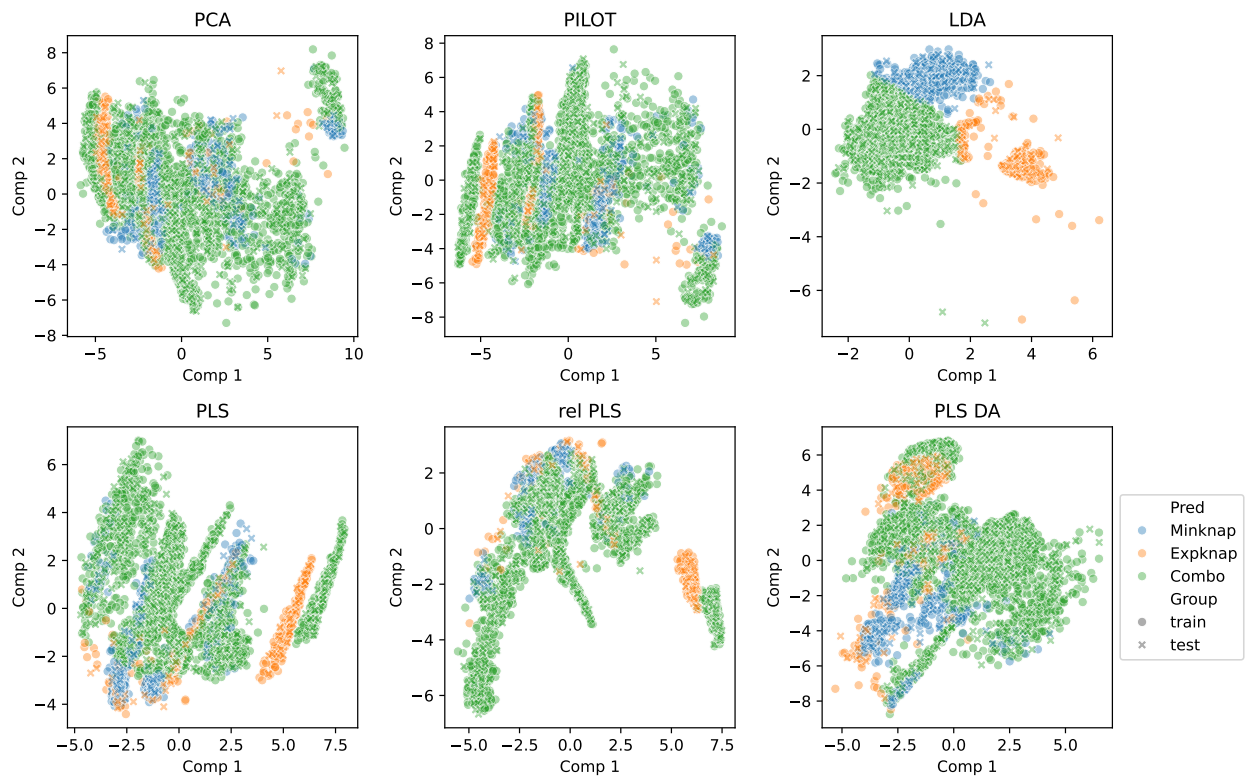


Fig. 11: 2D projections of knapsack instance space showing predicted best algorithm