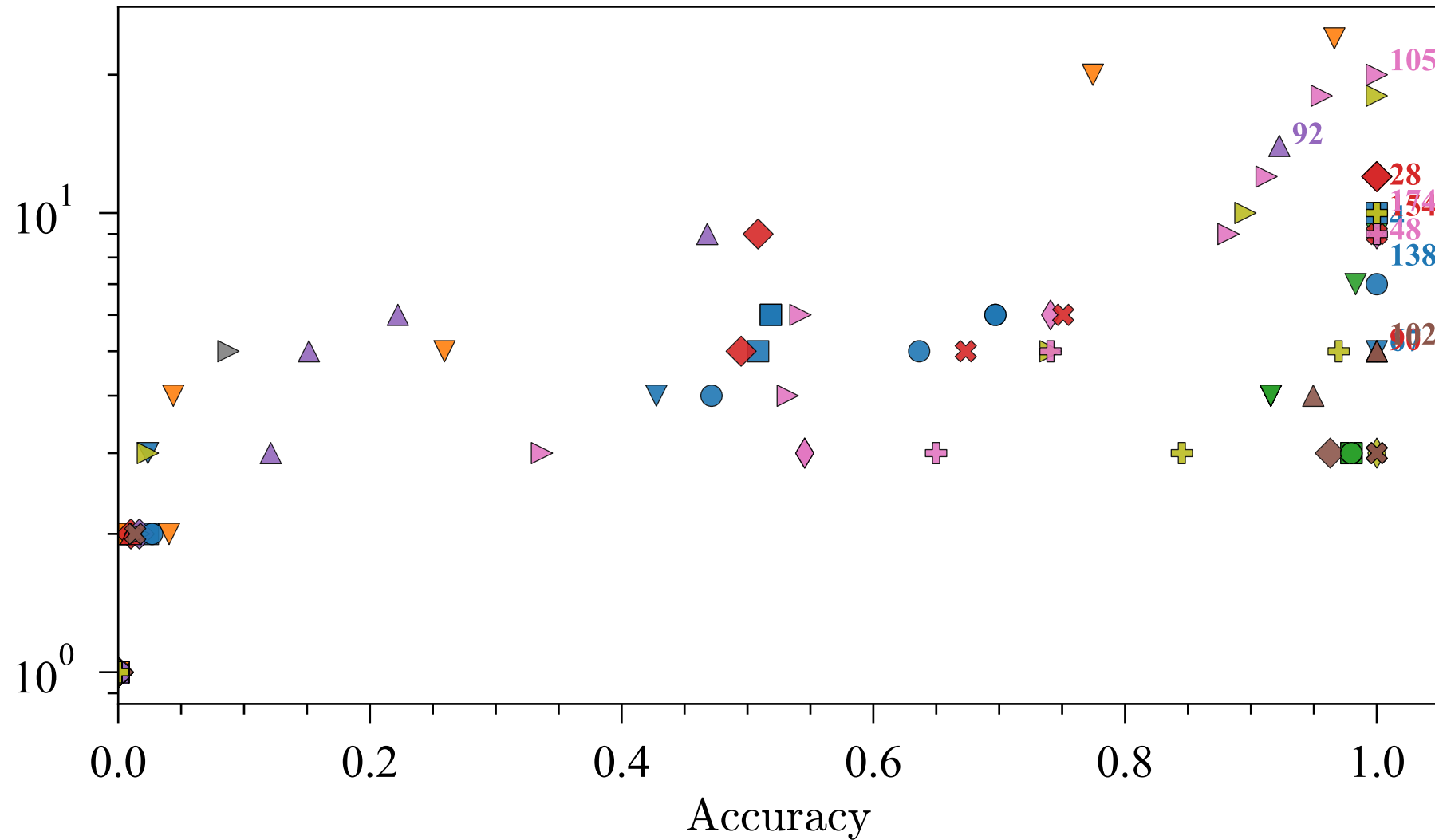


Number of clusters



■ Z-score - NO DR - KMEANS
 ■ Z-score - NO DR - DBSCAN
 ■ Z-score - NO DR - HDBSCAN
 ◆ Z-score - PCA - KMEANS
 ◆ Z-score - PCA - DBSCAN
 ◆ Z-score - PCA - HDBSCAN
 ◆ Z-score - UMAP - KMEANS
 ◆ Z-score - UMAP - DBSCAN
 ◆ Z-score - UMAP - HDBSCAN

▼ Mean - NO DR - KMEANS
 ▼ Mean - NO DR - DBSCAN
 ▼ Mean - NO DR - HDBSCAN
 ▲ Mean - PCA - KMEANS
 ▲ Mean - PCA - DBSCAN
 ▲ Mean - PCA - HDBSCAN
 ► Mean - UMAP - KMEANS
 ► Mean - UMAP - DBSCAN
 ► Mean - UMAP - HDBSCAN

● Min-Max - NO DR - KMEANS
 ● Min-Max - NO DR - DBSCAN
 ● Min-Max - NO DR - HDBSCAN
 ✕ Min-Max - PCA - KMEANS
 ✕ Min-Max - PCA - DBSCAN
 ✕ Min-Max - PCA - HDBSCAN
 + Min-Max - UMAP - KMEANS
 + Min-Max - UMAP - DBSCAN
 + Min-Max - UMAP - HDBSCAN

4: Z-score - NO DR - KMEANS: $n_{clusters} = 10$, $n_{neighbors}^{kNN} = 3$

28: Z-score - PCA - KMEANS: $n_{comp} = 16$, $n_{clusters} = 12$, $n_{neighbors}^{kNN} = 11$

48: Z-score - UMAP - KMEANS: $n_{neighbors}^{UMAP} = 9$, $min_{dist} = 0.50$, $n_{components} = 5$, $n_{clusters} = 9$, $n_{neighbors}^{kNN} = 11$

67: Mean - NO DR - KMEANS: $n_{clusters} = 5$, $n_{neighbors}^{kNN} = 2$

90: Mean - PCA - KMEANS: $n_{comp} = 9$, $n_{clusters} = 5$, $n_{neighbors}^{kNN} = 2$

92: Mean - PCA - DBSCAN: $n_{comp} = 4$, $eps = 68.96$, $min_{samples} = 12$, $n_{neighbors}^{kNN} = 13$

102: Mean - PCA - HDBSCAN: $n_{comp} = 12$, $min_{cluster\ size} = 55$, $min_{samples} = 42$, $\epsilon = 0.35$, $n_{neighbors}^{kNN} = 11$

105: Mean - UMAP - KMEANS: $n_{neighbors}^{UMAP} = 10$, $min_{dist} = 0.36$, $n_{components} = 4$, $n_{clusters} = 20$, $n_{neighbors}^{kNN} = 5$

138: Min-Max - NO DR - KMEANS: $n_{clusters} = 7$, $n_{neighbors}^{kNN} = 14$

154: Min-Max - PCA - KMEANS: $n_{comp} = 28$, $n_{clusters} = 9$, $n_{neighbors}^{kNN} = 11$

174: Min-Max - UMAP - KMEANS: $n_{neighbors}^{UMAP} = 10$, $min_{dist} = 0.45$, $n_{components} = 4$, $n_{clusters} = 9$, $n_{neighbors}^{kNN} = 4$