WSI Lista 4

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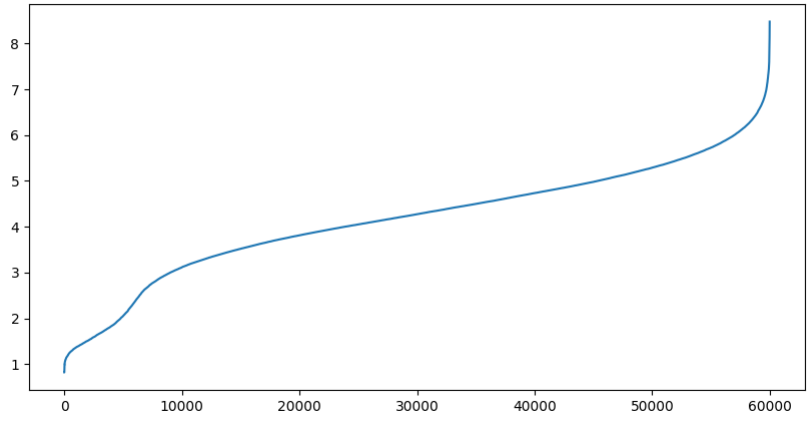
1 Zadanie 1

Porównanie współczynnika rozpoznawalności w porównaniu z siecią neuronową z poprzedniej listy

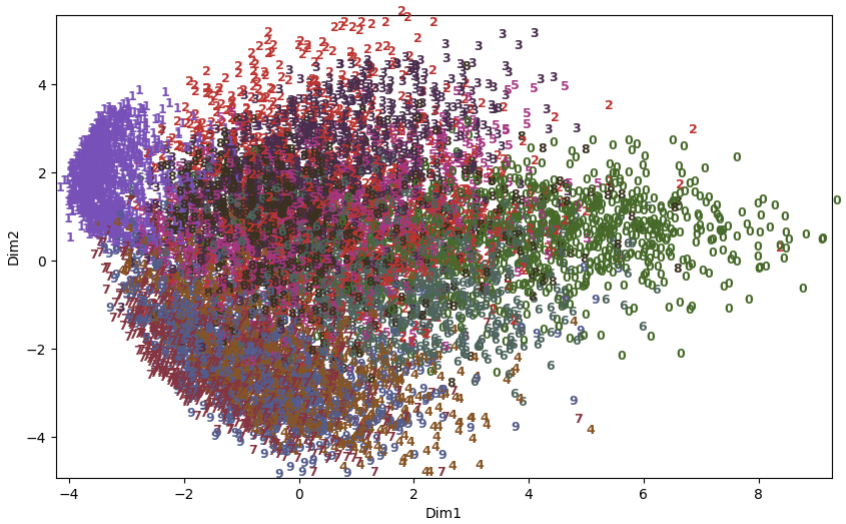
epochs/trees	neural network	decision forest
5	0.975600004196167	0.9151
10	0.9768999814987183	0.9408
20	0.9787999987602234	0.9599
50	0.9807000160217285	0.9669
100	0.9815000295639038	0.9661
200	0.9818000197410583	0.9695

2 Zadanie 2

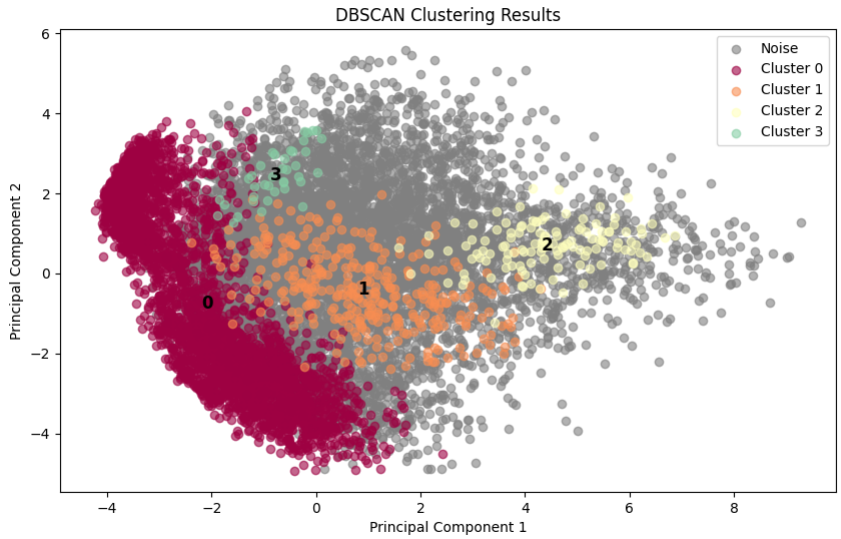
2.1 Eksperymenty



Rysunek 1: posortowane wartości dystansów między sąsiadami

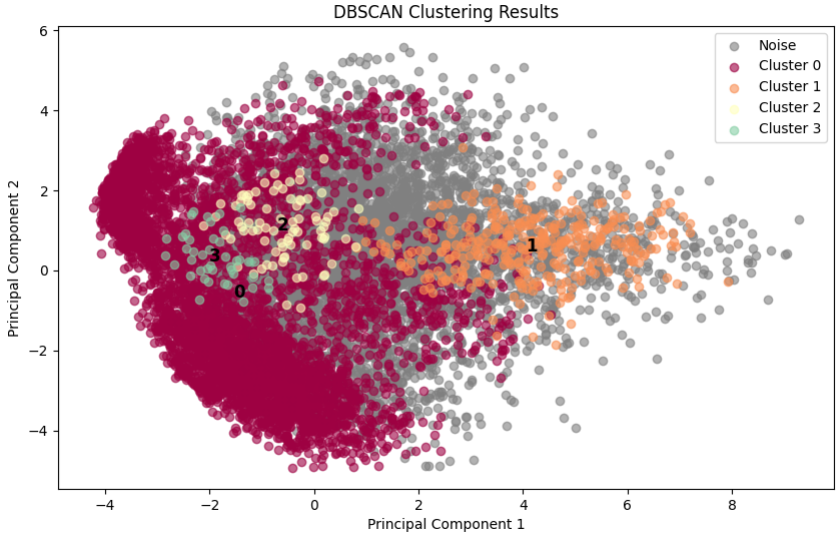


Rysunek 2: baza danych MNIST



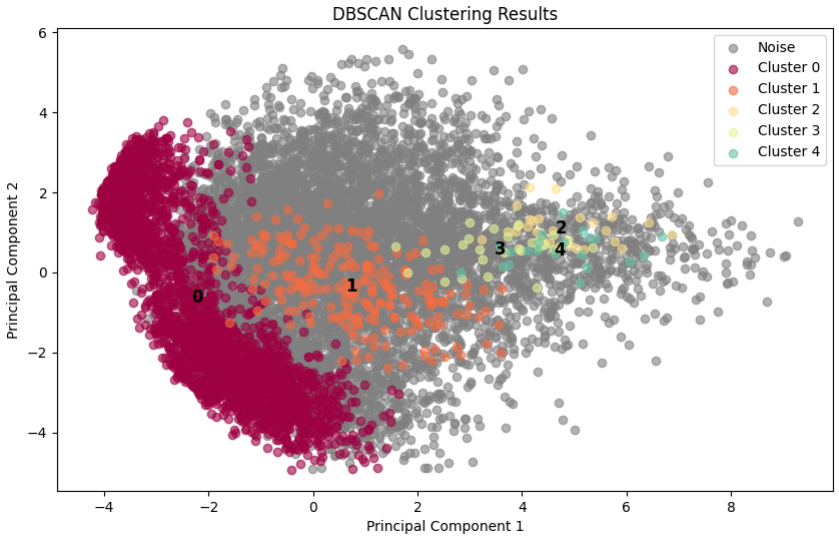
Rysunek 3: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 5.5 oraz min samples 35

- Estimated number of clusters: 4
- Estimated number of noise percentage: 63.500
- Silhouette Coefficient: -0.045
- Cluster 0 with most common number 1 has missclassification percentage = 64.48%
- Cluster 2 with most common number 0 has missclassification percentage = 0.00%
- Cluster 1 with most common number 6 has missclassification percentage = 0.00%
- Cluster 3 with most common number 3 has missclassification percentage = 0.00%



Rysunek 4: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 6.0 oraz min samples 50

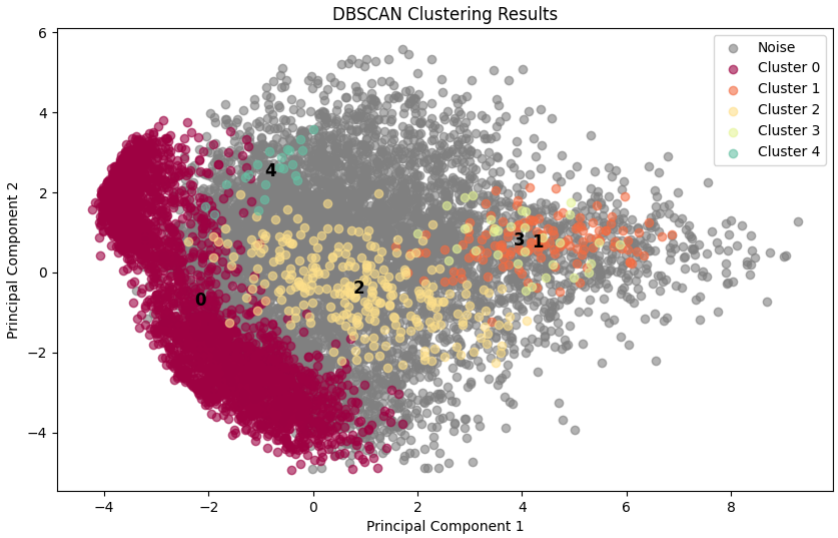
- Estimated number of clusters: 4
- Estimated number of noise percentage: 49.200
- Silhouette Coefficient: -0.054
- Cluster 0 with most common number 1 has missclassification percentage = 75.59%
- Cluster 1 with most common number 0 has missclassification percentage = 0.00%
- Cluster 2 with most common number 8 has missclassification percentage = 3.70%
- Cluster 3 with most common number 5 has missclassification percentage = 0.00%



Rysunek 5: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 5.2 oraz min samples 25

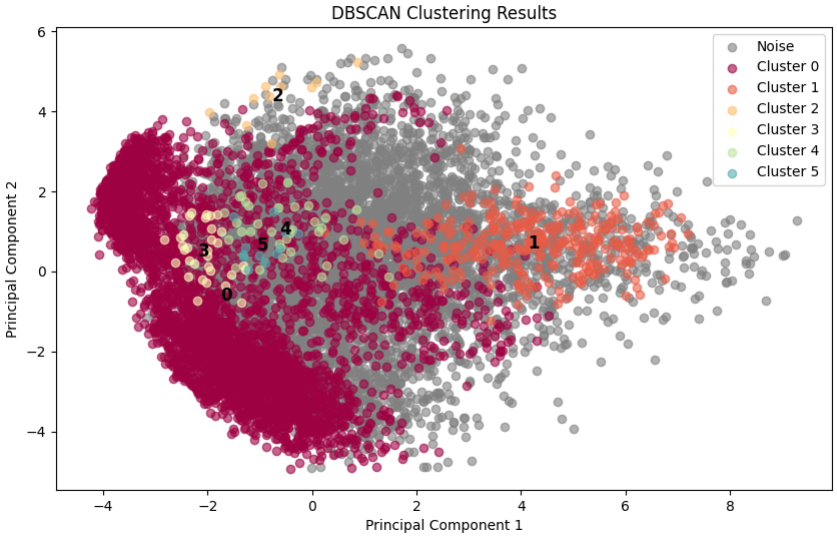
- Estimated number of clusters: 5
- Estimated number of noise percentage: 69.000
- Silhouette Coefficient: -0.033

- Cluster 0 with most common number 1 has missclassification percentage = 59.96
- Cluster 2 with most common number 0 has missclassification percentage = 0.00
- Cluster 1 with most common number 6 has missclassification percentage = 0.00
- Cluster 3 with most common number 0 has missclassification percentage = 0.00
- Cluster 4 with most common number 0 has missclassification percentage = 0.00



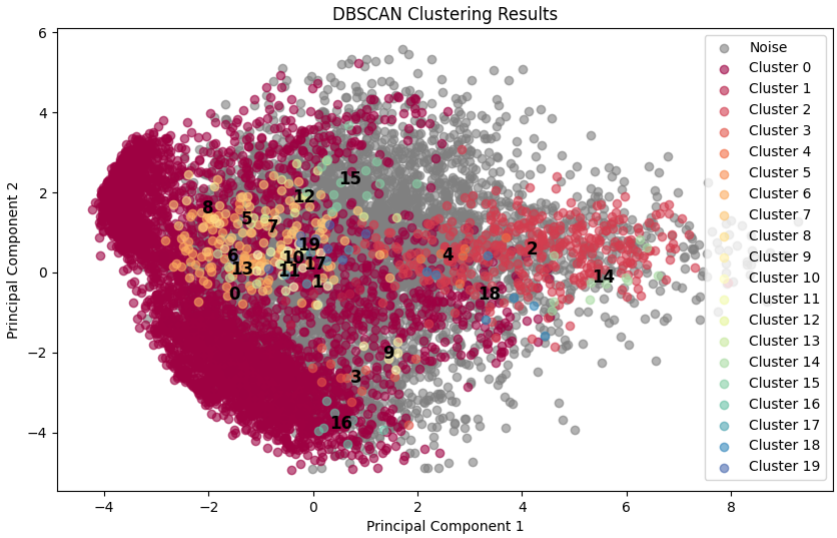
Rysunek 6: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 5.2 oraz min samples 20

- Estimated number of clusters: 5
- Estimated number of noise percentage: 66.440
- Silhouette Coefficient: -0.057
- Cluster 0 with most common number 1 has missclassification percentage = 61.41
- Cluster 1 with most common number 0 has missclassification percentage = 0.00
- Cluster 2 with most common number 6 has missclassification percentage = 0.00
- Cluster 4 with most common number 3 has missclassification percentage = 0.00
- Cluster 3 with most common number 0 has missclassification percentage = 0.00



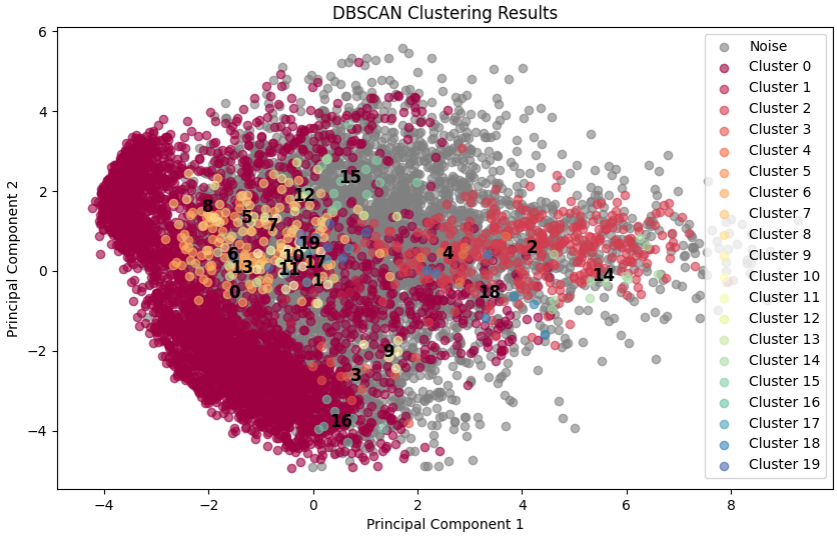
Rysunek 7: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 5.2 oraz min samples 12

- Estimated number of clusters: 6
- Estimated number of noise percentage: 58.600
- Silhouette Coefficient: -0.077
- Cluster 0 with most common number 1 has missclassification percentage = 70.09
- Cluster 1 with most common number 0 has missclassification percentage = 0.00
- Cluster 4 with most common number 8 has missclassification percentage = 0.00
- Cluster 2 with most common number 2 has missclassification percentage = 0.00
- Cluster 3 with most common number 5 has missclassification percentage = 0.00
- Cluster 5 with most common number 5 has missclassification percentage = 0.00



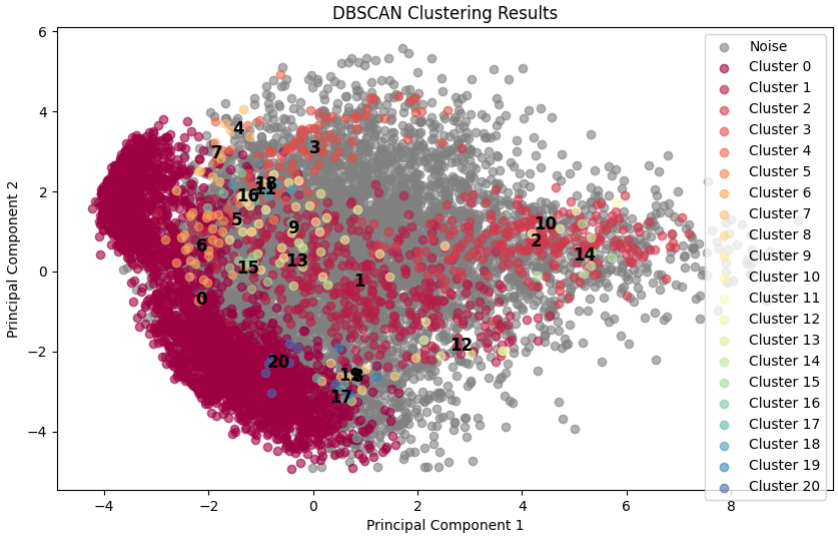
Rysunek 8: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 5.2 oraz min samples 8

- Estimated number of clusters: 20
- Estimated number of noise percentage: 52.600
- Silhouette Coefficient: -0.139
- Cluster 0 with most common number 1 has missclassification percentage = 72.62
- Cluster 2 with most common number 0 has missclassification percentage = 0.00
- Cluster 9 with most common number 6 has missclassification percentage = 0.00
- Cluster 1 with most common number 5 has missclassification percentage = 0.00
- Cluster 7 with most common number 8 has missclassification percentage = 0.00
- Cluster 5 with most common number 6 has missclassification percentage = 0.00
- Cluster 3 with most common number 9 has missclassification percentage = 0.00
- Cluster 4 with most common number 0 has missclassification percentage = 0.00
- Cluster 6 with most common number 5 has missclassification percentage = 0.00
- Cluster 19 with most common number 5 has missclassification percentage = 0.00
- Cluster 15 with most common number 3 has missclassification percentage = 0.00
- Cluster 18 with most common number 0 has missclassification percentage = 0.00
- Cluster 12 with most common number 5 has missclassification percentage = 0.00
- Cluster 8 with most common number 8 has missclassification percentage = 0.00
- Cluster 10 with most common number 8 has missclassification percentage = 0.00
- Cluster 13 with most common number 5 has missclassification percentage = 0.00
- Cluster 14 with most common number 0 has missclassification percentage = 0.00
- Cluster 11 with most common number 8 has missclassification percentage = 0.00
- Cluster 17 with most common number 5 has missclassification percentage = 0.00
- Cluster 16 with most common number 4 has missclassification percentage = 0.00



Rysunek 9: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 5 oraz min samples 8

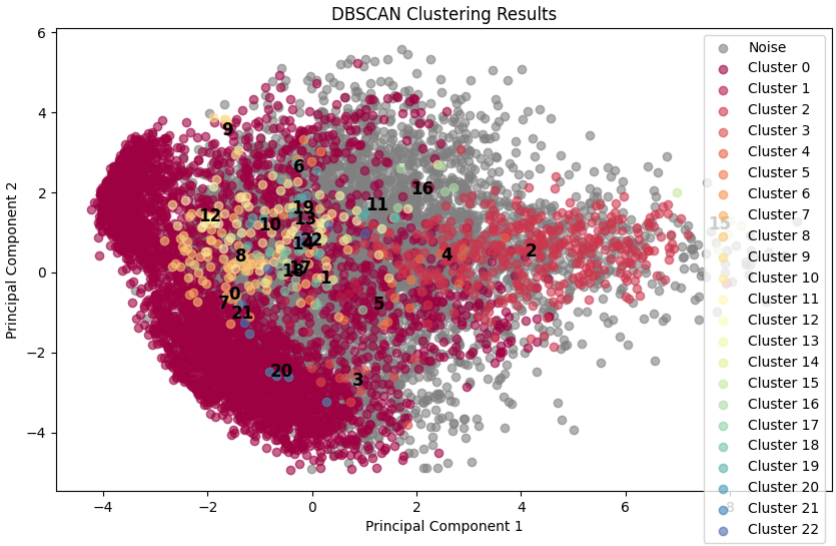
- Estimated number of clusters: 17
- Estimated number of noise percentage: 60.520
- Silhouette Coefficient: -0.133
- Cluster 0 with most common number 1 has missclassification percentage = 67.51
- Cluster 1 with most common number 0 has missclassification percentage = 0.00
- Cluster 3 with most common number 3 has missclassification percentage = 0.00
- Cluster 6 with most common number 8 has missclassification percentage = 0.00
- Cluster 7 with most common number 2 has missclassification percentage = 0.00
- Cluster 4 with most common number 9 has missclassification percentage = 0.00
- Cluster 2 with most common number 3 has missclassification percentage = 0.00
- Cluster 5 with most common number 2 has missclassification percentage = 0.00
- Cluster 9 with most common number 0 has missclassification percentage = 0.00
- Cluster 8 with most common number 5 has missclassification percentage = 0.00
- Cluster 11 with most common number 8 has missclassification percentage = 0.00
- Cluster 15 with most common number 5 has missclassification percentage = 0.00
- Cluster 13 with most common number 0 has missclassification percentage = 0.00
- Cluster 14 with most common number 0 has missclassification percentage = 0.00
- Cluster 10 with most common number 6 has missclassification percentage = 0.00
- Cluster 12 with most common number 5 has missclassification percentage = 0.00
- Cluster 16 with most common number 9 has missclassification percentage = 0.00



Rysunek 10: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 4.9 oraz min samples 7

- Estimated number of clusters: 21
- Estimated number of noise percentage: 62.410

- Silhouette Coefficient: -0.146
- Cluster 0 with most common number 1 has missclassification percentage = 61.70
- Cluster 17 with most common number 4 has missclassification percentage = 0.00
- Cluster 1 with most common number 6 has missclassification percentage = 0.00
- Cluster 2 with most common number 0 has missclassification percentage = 0.00
- Cluster 18 with most common number 3 has missclassification percentage = 0.00
- Cluster 9 with most common number 8 has missclassification percentage = 0.00
- Cluster 10 with most common number 0 has missclassification percentage = 0.00
- Cluster 3 with most common number 3 has missclassification percentage = 0.00
- Cluster 5 with most common number 6 has missclassification percentage = 0.00
- Cluster 8 with most common number 9 has missclassification percentage = 0.00
- Cluster 4 with most common number 2 has missclassification percentage = 0.00
- Cluster 7 with most common number 2 has missclassification percentage = 0.00
- Cluster 16 with most common number 3 has missclassification percentage = 0.00
- Cluster 6 with most common number 5 has missclassification percentage = 0.00
- Cluster 13 with most common number 8 has missclassification percentage = 0.00
- Cluster 11 with most common number 8 has missclassification percentage = 0.00
- Cluster 14 with most common number 0 has missclassification percentage = 0.00
- Cluster 12 with most common number 6 has missclassification percentage = 0.00
- Cluster 15 with most common number 5 has missclassification percentage = 0.00
- Cluster 20 with most common number 9 has missclassification percentage = 0.00
- Cluster 19 with most common number 7 has missclassification percentage = 0.00



Rysunek 11: klastry po wykonaniu algorytmu DBSCAN z argumentami eps 5.1 oraz min samples 6

- Estimated number of clusters: 23
- Estimated number of noise percentage: 52.190
- Silhouette Coefficient: -0.152
- Cluster 0 with most common number 1 has missclassification percentage = 72.76
- Cluster 2 with most common number 0 has missclassification percentage = 0.00
- Cluster 6 with most common number 3 has missclassification percentage = 0.00
- Cluster 1 with most common number 5 has missclassification percentage = 0.00
- Cluster 10 with most common number 8 has missclassification percentage = 0.00
- Cluster 11 with most common number 5 has missclassification percentage = 0.00
- Cluster 7 with most common number 5 has missclassification percentage = 0.00
- Cluster 3 with most common number 9 has missclassification percentage = 0.00
- Cluster 4 with most common number 0 has missclassification percentage = 0.00
- Cluster 5 with most common number 6 has missclassification percentage = 0.00
- Cluster 14 with most common number 8 has missclassification percentage = 0.00
- Cluster 22 with most common number 5 has missclassification percentage = 0.00
- Cluster 16 with most common number 5 has missclassification percentage = 0.00
- Cluster 9 with most common number 2 has missclassification percentage = 0.00
- Cluster 19 with most common number 5 has missclassification percentage = 0.00
- Cluster 12 with most common number 8 has missclassification percentage = 0.00
- Cluster 8 with most common number 5 has missclassification percentage = 0.00
- Cluster 20 with most common number 4 has missclassification percentage = 0.00
- Cluster 17 with most common number 8 has missclassification percentage = 0.00
- Cluster 13 with most common number 8 has missclassification percentage = 0.00
- Cluster 21 with most common number 5 has missclassification percentage = 0.00
- Cluster 15 with most common number 0 has missclassification percentage = 0.00
- Cluster 18 with most common number 8 has missclassification percentage = 0.00