## **Clusters by Descriptions**

## 1 Using Word2Vec

• We got 10 clusters using Word2Vec method. Clusters according to their themes are following-

Cluster 0: ['hanging', 'holder', 'light']

Cluster 1: ['christmas', 'paper', 'vintage']

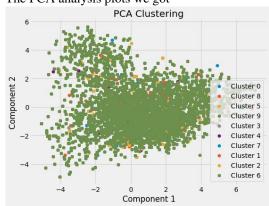
Cluster 1: [clinistinas, paper, vintage]
Cluster 2: ['bag', 'jumbo', 'lunch']
Cluster 3: ['clock', 'drawer', 'red']
Cluster 4: ['of', 'pack', 'set']
Cluster 5: ['blue', 'pink', 'red']
Cluster 6: ['decoration', 'heart', 'white']

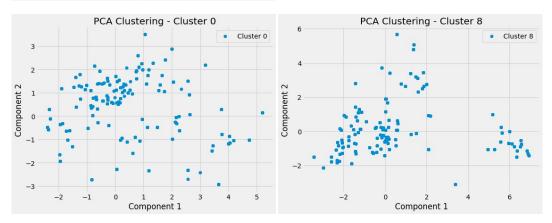
Cluster 7: ['box', 'design', 'retrospot']

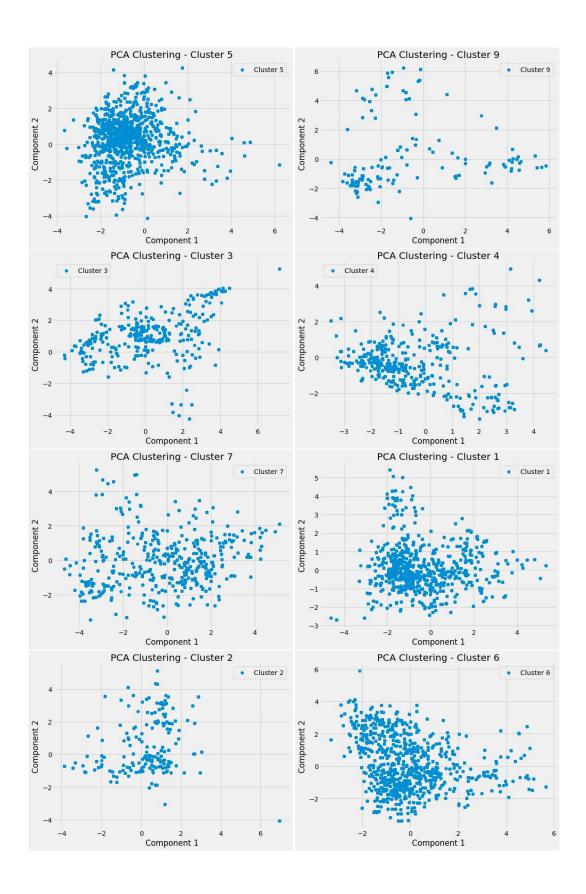
Cluster 8: ['home', 'metal', 'sign']

Cluster 9: ['bottle', 'card', 'water']

• The PCA analysis plots we got –







## 2 Using BERT

• Using BERT we also created 10 clusters. Clusters according to their themes are following-

Cluster 0: of, red, set, box, cake Cluster 1: bag, set, of, vintage, red Cluster 2: set, bag, of, blue, lunch Cluster 3: set, bag, red, of, vintage Cluster 4: set, of, heart, design, bag Cluster 5: of, set, design, vintage, bag Cluster 6: bag, retrospot, jumbo, heart, red Cluster 7: set, red, retrospot, of, colour Cluster 8: set, heart, christmas, vintage, of Cluster 9: set, of, bag, vintage, heart

• Occurances of every cluster is -

Cluster 1: 47329 occurrences

Cluster 9: 43537 occurrences

Cluster 3: 41791 occurrences Cluster 6: 41636 occurrences

Cluster 5: 41447 occurrences

Cluster 0: 41423 occurrences

Cluster 7: 38196 occurrences

Cluster 8: 37784 occurrences

Cluster 4: 37350 occurrences

Cluster 2: 36336 occurrences