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 Machine Learning
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 Assignment 3 - Option 2

Method, Defense, and Discussion of Clustered Artwork Assignment 3 - Option 2

I aimed for a mix of visually harmonious artwork that still showcases diversity, all tied together a bit abstractly by a theme. I chose features that could have some nuance to them (despite their data label being boolean/binary or a number on a scale) — representation, semi representation, kinetic, spatial dimension², and art movement — and paired it with 2 visual variables like texture and area.

Starting with 10 clusters and adjusting based on the elbow plot and silhouette graphs, I settled on **12** clusters that display sufficient cohesion to me.

After qualitatively analyzing the clusters, a good cluster to me was one that met my goal of looking like they could be grouped together in an art exhibit. Upon closer look, they fit well together, fulfilling my goal of resembling a curated art exhibit with a mix of mediums and styles, yet connected thematically. I found this process to be somewhat difficult — striking the balance between diversity and harmony, but ultimately landed on clustering that I would be pleased to see grouped together in a museum.

Examples

Cluster 4:

Cluster 4 shows cohesion in an unexpected way. For example, there is an underlying expressive nature and energy to the strokes and marks of the material which includes paint, charcoal, metal, wood, etc. It is one of the larger clusters and I am satisfied with how it includes different types of artwork from photography, to drawings, to sculptures and prints. There is still a difficult to describe element that ties these artworks together. Much of it can be attributed to visual elements such as linework and perhaps the abstract art movements, characteristics aligned with the chosen clustering criteria, including representation, spatial dimension, kinetic attributes, and texture/area considerations.

Cluster 11:

The spatial dimension, area of the artwork, and texture of the artwork definitely shine through as quite similar throughout the cluster. There is a sense of repetition in the lines and the way they occupy the space in the artwork, and the composition that appears to make sense in this cluster. Certain pieces feature dynamic lines that command significant canvas space, lending them an energetic quality. Despite originating from different time periods and countries, these artworks seamlessly coexist, suggesting a natural harmony suitable for display together in a gallery setting.

Images in cluster: 4



Images in cluster: 11

