

CLASSIFYING PAINTINGS BY ART MOVEMENT

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Background:

According to a forum on reserachgate.net [[source](#)], museums have a special relationship with their local communities. Museums are public institutions. They struggle with budget cuts and rely on increased audience engagement to encourage economic support. Some museums, particularly smaller and lesser known ones, are not able to offer programs and activities that actively engage people in their local communities.

However, in recent years engagement has changed and potentially given museums an opportunity to capitalize on increased community support. According to Britannica's article on the Museum of Modern Art's contemporary challenges [[source](#)], "One of the most pressing issues for museums of modern art is how to contend with the growth in, and changing nature of, their audiences...the need to engage the public has become an increasingly important aspect of their efforts."

Part of the struggle of engaging new audiences is that art used to be commonly "shared by a relatively small number of people from similar social and intellectual backgrounds...[it has now] become a hugely popular experience shared by many people from far more diverse backgrounds." It can be intimidating and confusing to look at a work of art and not understand why it was and continues to be culturally significant and important, especially for budding art enthusiasts.

A common problem noted in most art museums is that there are usually very brief and vague descriptions of the artwork displayed, solely providing the artist's name, the title of the artwork, and the approximate year that it was made if at all. Unless they are highly significant, rarely do museums provide analysis or further information such as style or art movement on the artwork. While not everyone is an expert in art history, anyone can appreciate the beauty, talent, and depth of meaning that can come from them. Understanding different art movements and the styles of a piece can help bridge the gap from merely curious to ardent art enthusiasts.

Problem Statement:

What tools can museums use to engage novice art enthusiasts, help museum-goers understand art movements, and potentially encourage enough interest to patron the arts?

Data:

The data comes from a Kaggle dataset containing 16,800 images of paintings from the 50 most influential artists of all time [[dataset](#)] and a csv file identifying the artist, the movement, and the quantity of paintings for each artist.

Methodology:

Because the dataset has over 16,000 images, it will be reduced to a more manageable size proportional to the quantity of paintings each artist has. The data will be preprocessed, normalized, and modeled using the Keras package by analyzing the use of light contrast, geometric patterns/shape, color gradients to predict and correctly identify paintings by their art movement. Some additional features will have to be cleaned and created within the csv file. The most important part of this stage is to set up the pipeline properly to train and test images for future reusability and flexibility. The data will be modeled, evaluated, and refined.