

# Classifying Styles of Art

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Can a deep learning model learn how to classify the style  
(not the content) of a painting?









# Previous work...

## *Recognizing Art Style Automatically in painting with deep learning*

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Experiment with different architectures and techniques to classify 25 styles a dataset from WikiArt.

- Versions of AlexNet & ResNet
- Pre-trained v. re-trained
- Bagging, augmentation, distortion

# Dataset: WikiArt

- 80,000 images
- 25 classes (same as paper)
- Access:
  - Website
  - .zip downloads of dataset
  - There exist APIs
- Potential test sets:
  - Train-test split
  - *Ergsap* (used in paper)
  - National Gallery of Art / other museums

The screenshot shows the WikiArt website interface. At the top, there's a navigation bar with the WikiArt logo, a search icon, a language dropdown set to 'EN', and a 'SIGN IN' button. Below the navigation bar, there's a breadcrumb trail: 'Home / Artworks / Styles'. The main content area is titled 'ARTWORKS BY STYLE' and includes a description: 'A style of an artwork refers to its distinctive visual elements, techniques and methods. It usually corresponds with an art movement or a school (group) that its author is associated with.' Below this, there are three filters: 'by time', 'by name', and 'by count'. The page displays a grid of art styles with their respective counts. The styles are organized into three columns.

Style	Count
<b>Ancient Egyptian Art</b>	
Early Dynastic	2
Old Kingdom	1
Middle Kingdom	9
New Kingdom	114
Amarna	12
3rd Intermediate Period	16
Late Period	6
Ptolemaic	4
2nd Intermediate Period	1
<b>Ancient Greek Art</b>	
Archaic	39
Classical	49
Hellenistic	135
Metaphysical art	265
Tonalism	391
Impressionism	16722
Magic Realism	1758
Fantastic Realism	412
Pointillism	591
Divisionism	425
Abstract Art	2306
Neo-baroque	256
Japonism	211
Purism	174
Verism	109
Art Deco	1122
Precisionism	362
Cloisonnism	165
Neo-Impressionism	1160
Modernism	72
<b>Contemporary Art</b>	
Conceptual Art	2115
Minimalism	2242
Post-Minimalism	747
Light and Space	435
Environmental (Land) Art	184
Junk Art	68
Cyber Art	58
Photorealism	411
Hyper-Realism	310
Poster Art Realism	49
Contemporary Realism	1762

# Expressionism

Style

## FEATURED



Old Tramp

Laszlo Mednyanszky • 1880



Bildnis Des Malers Ploner

Albin Egger-Lienz • 1883



Frühes Selbstbildnis

Albin Egger-Lienz • 1884



Self portrait

Edvard Munch • 1886



Jurisprudence

Edvard Munch • 1887



Calvary

James Ensor • 1886



Christ's Entry Into Brussels in 1889

James Ensor • 1888



The Sick Child

Edvard Munch • 1885-1886



# Our plan...

- Image classification on 25 style classes
- Reproduce/improve on previous paper
- Models:
  - AlexNet, ResNet, Visual Transformers
  - Comparing training time, inference time, and performance
- Experiment with different techniques
  - Contrastive Learning
  - Other architectures which have high accuracy on ImageNet
- Produce a blog post/short paper summarizing our results

# Styles/movements considered

Abstract Art, Abstract Expressionism, Art Informel, Art Nouveau (Modern), Baroque, Color Field Painting, Cubism, Early Renaissance, Expressionism, High Renaissance, Impressionism, Magic Realism, Mannerism (Late Renaissance), Minimalism, Naive Art (Primitivism), Neoclassicism, Northern Renaissance, Pop Art, Post-Impressionism, Realism, Rococo, Romanticism, Surrealism, Symbolism and Ukiyo-e.

**Thanks!**