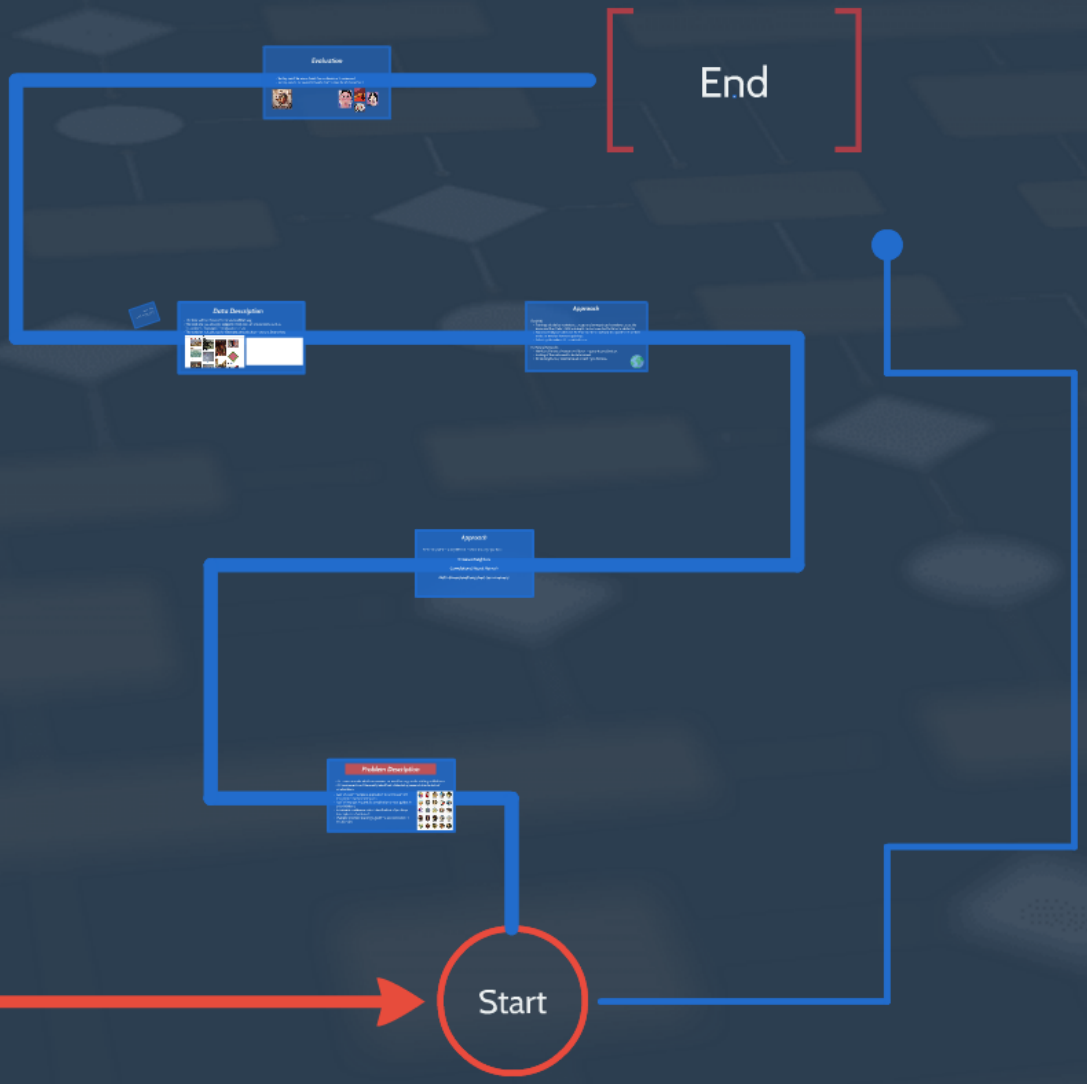
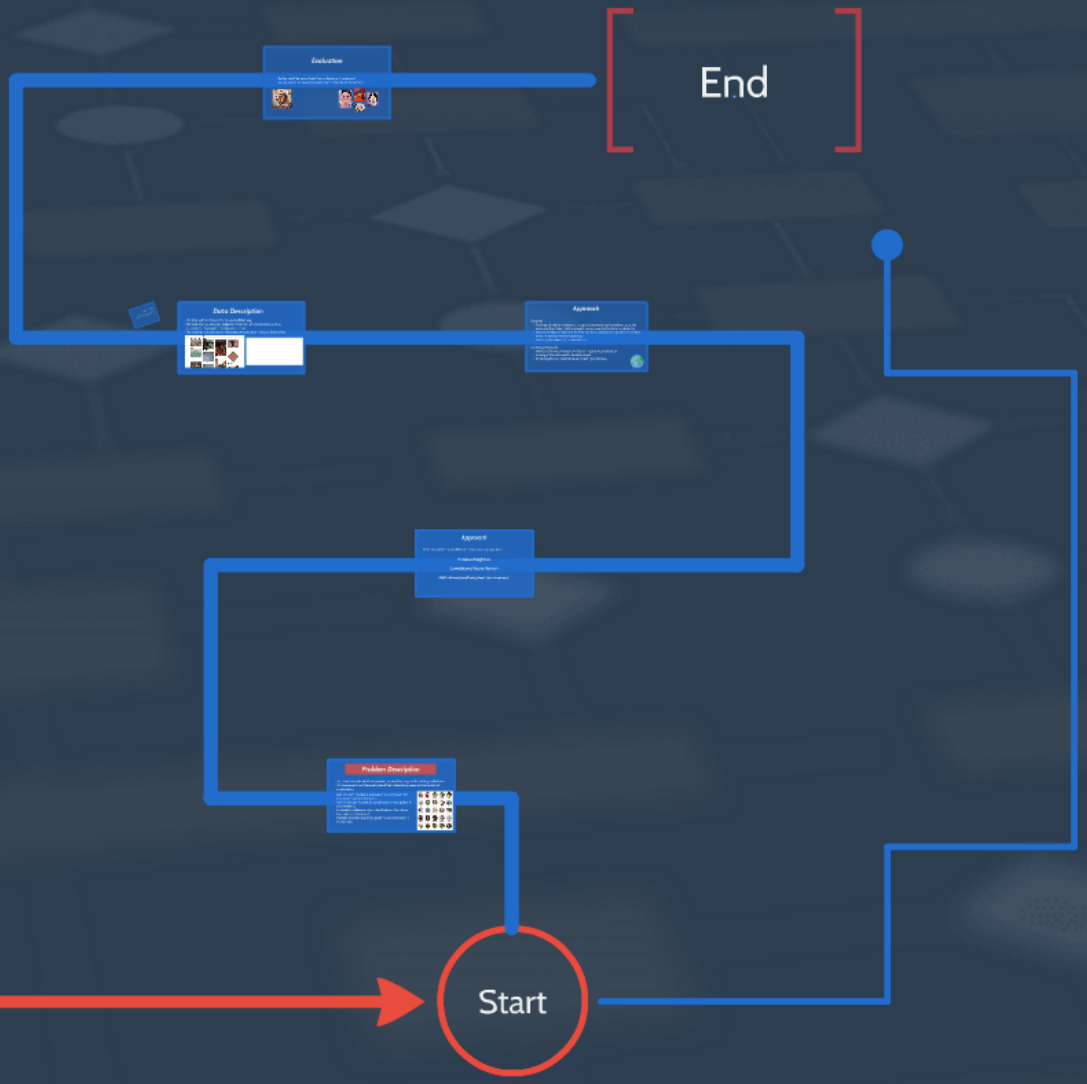


ArtMove

CS 464 Project

Bora Bardük | Muhammed Çavuşoğlu | Duygu Durmuş | Mert Inan | Ekin Uyumaz



ArtMove

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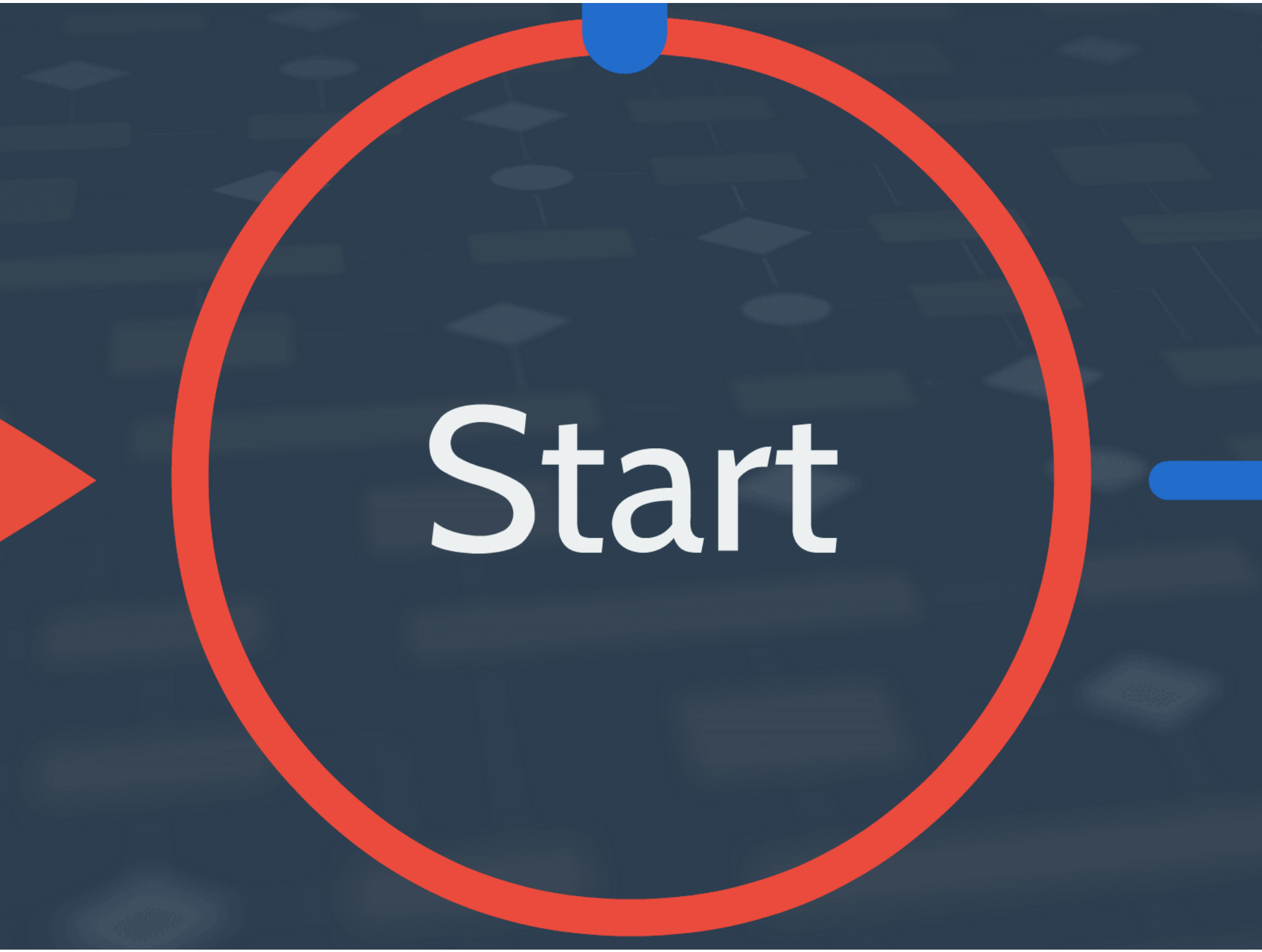
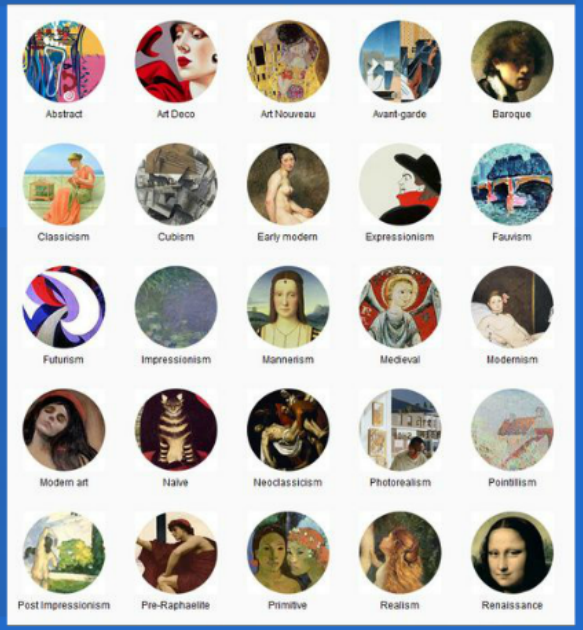

Start

Problem Description

- Art lovers wonder which movement artwork belongs while visiting exhibitions.
- Art movement can't be easily identified while doing research due to lack of explanation.
- Lack of a commonplace application for art movement recognition by museum-goers.
- Lack of interactivity and personalization of tour guides in art exhibitions.
- In museum databases, quick classification of paintings into styles is a bottleneck.
- Multiple machine learning algorithms are not tested in this domain.



Approach

Tackle the problem using different machine learning algorithms:

K Nearest Neighbors

Convolutional Neural Network

Multi-dimensional long short-term memory

Approach

For kNN:

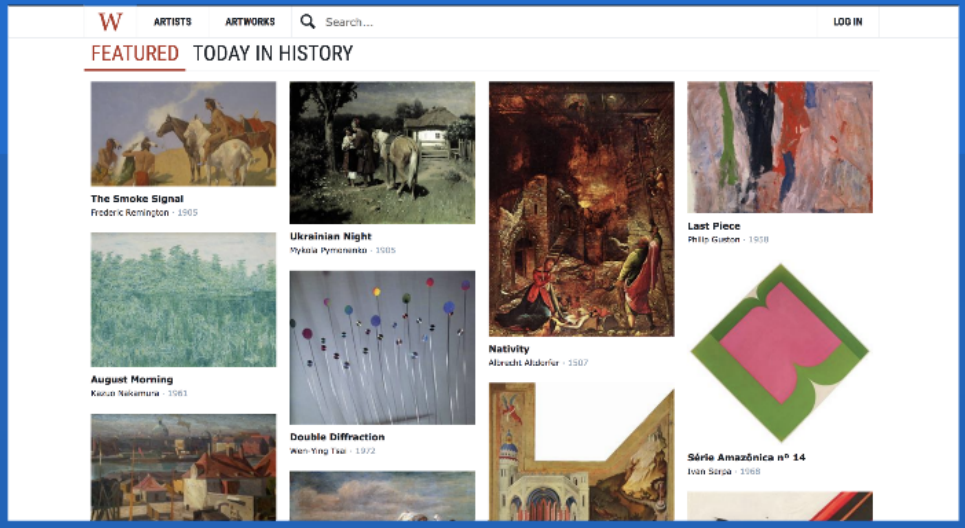
- Paintings should be vectorized, and general concepts such as color palette, the scene and the stroke width and depth can be important features to cluster for.
- Dimensionality reduction can be done on these, and look for specific feature that make a difference between paintings.
- Selecting the value of K is a critical issue.

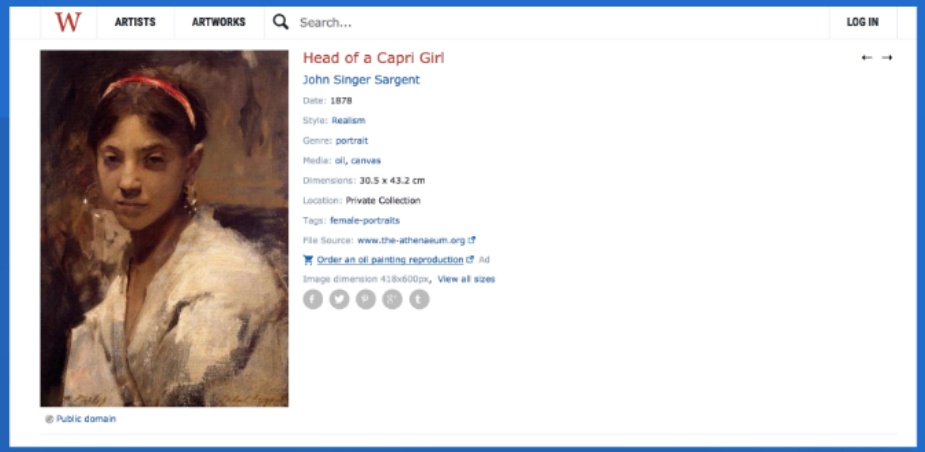
For Neural Networks:

- Number of layers of neurons will be an important consideration.
- Pooling of the data need to be determined.
- Initial weights may need to be set according to features.

Data Description

- The data will be obtained from **www.wikiart.org**.
- The web site has artworks tagged in their own art movements such as "surrealism", "baroque", "neoclassicism", etc.
- The website includes nearly 150.000 artworks from nearly 2.500 artists.





WORK DIVISION

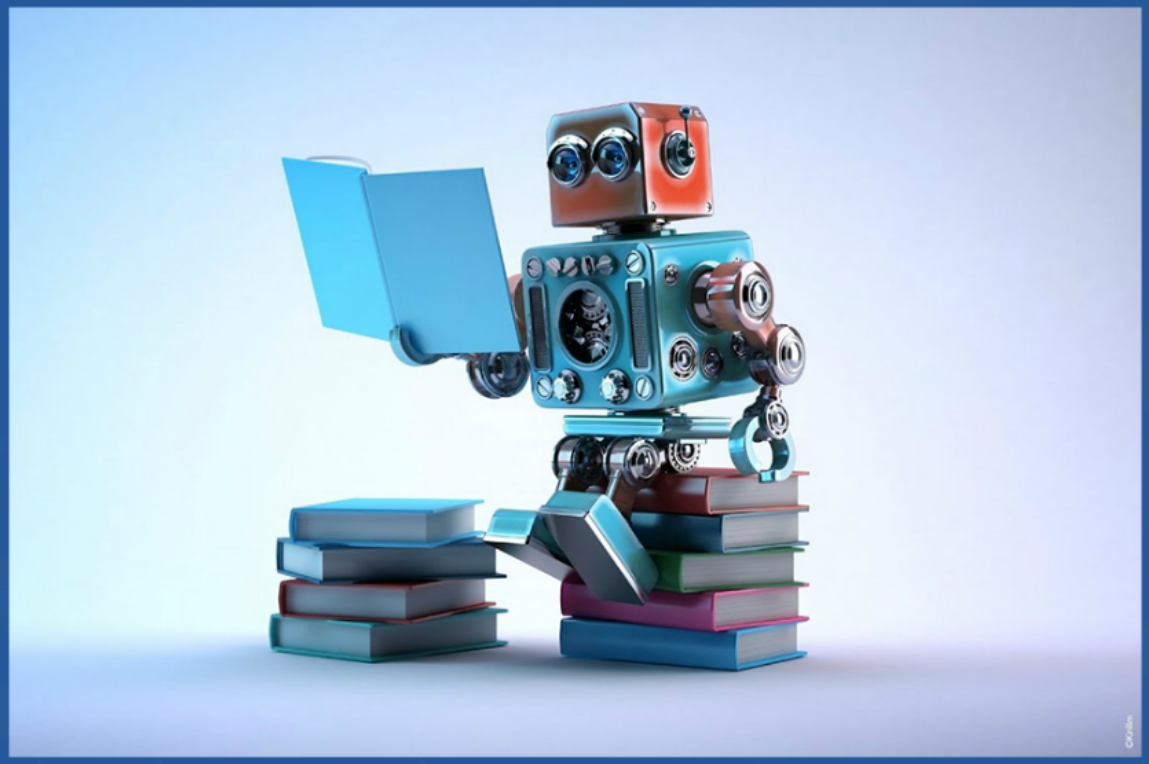
- Each member will participate equally in all stages.
- Learning and testing different algorithms will take most time.
- Data collection can be done fast.

Evaluation

- Testing result for one artwork from a known art movement
- Testing results for several artworks from a specific art movement


End

Thank you for listening



Any suggestions or comments are welcomed