

1 Sketches

Our website aims to give you a more intuitive, comprehensive and interesting overview of the art history by displaying artworks of the 30 most influential painters of all time.

1.1 Basic Visualization

The basic sketches of the visualization is given in Figure 1. In this image, every dot is a painting created by an artist and the different colors represent different styles. The artworks are arranged by creation time and artworks created in the same year would be placed in the same column. There is a year range slider in the bottom which would be used to filter the time period. And we add one filter form that filter paintings by artists, countries or painting styles to help visitors focus on what they are interested in. By hovering over one dot here, the website would show the artwork and the relevant information, including the artist, creation year, genre, style and title.



Figure 1: The basic skeleton of the visualization

1.2 Introduction of artists and painting styles

The sketch of artists is given in Figure 2. After selecting a specific artist, we would show the basic information about the artist retrieved from wikipedia, including their names, years, nationalities, biographies and so on. Also we would visualise the number of artworks this artist created over the years and how his/her painting style developed over time. The sketch of painting styles is given in Figure 3. After selecting a specific style, We would give the basic introduction of each painting style and visualize its development based on country and time.

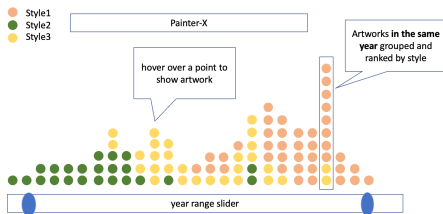


Figure 2: The sketches of artists

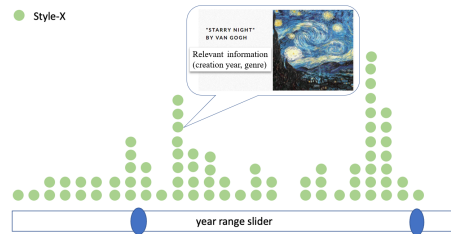


Figure 3: The sketches of painting styles

1.3 Painting styles transformation

In this web page, we give visualization of paintings in different styles. Visitors can upload their own picture and select the painting style they are interested in, then the website would transform and show their uploaded picture in the selected style. Through this interface, visitors can better appreciate the features of different painting styles.

2 Tools

We will use following tools:

- Atom and Bootstrap to edit frontend HTML and CSS files.
- d3.js library to create data visualizations including: evolution of the styles of the artists and the influence between artists of the same genre.
- d3-force for drawing connected graph.
- ml5.js library to train and run deep learning model for style transferring.

Our work is based on all lectures about d3.js library, such as Lecture: More interactive d3.js and Lecture: Mark, channels. Also, our project will be inspired by the future lectures including Lecture: Graphs and Lecture: Storytelling.

3 Extra Ideas

- We want to visualise the connections between different artists by exploring the relationship between them, such like mutual communication, similarity in creation style and time. The sketches of the visualization is given in Figure 4. The challenge is to come up with the appropriate metric for connections between artists.
- To make the website more interactive and help visitors test their knowledge, we may add one page for question and answer. In this page, our website would post some paintings and visitors could speculate the corresponding creator and style according to some features.

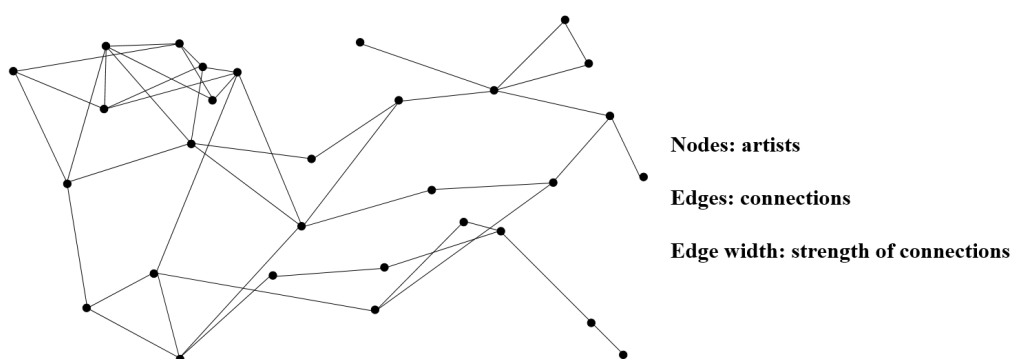


Figure 4: connection network