

Edinburgh Art Time

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Introduction

Challenge: Cultural map of Edinburgh

Project Name: Edinburgh Art Time

Audience: Visitors to Edinburgh



Introduction

Our project is mainly focused on the public art (sculpture) and street art in Edinburgh. We try to combine digital and physical techniques to help people know more about public art and understand the development of Edinburgh art from the perspective of time.

Introduction

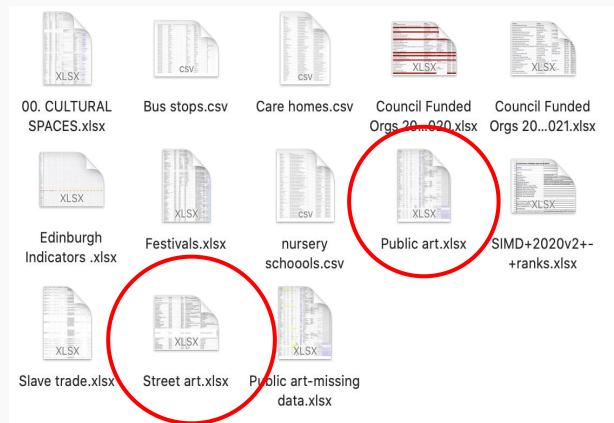
Data:

The Culture and Communities Mapping Project website interface. On the left, a sidebar allows users to select an area of interest (Neighbourhood, Ward) and filter by category (Schools, Performance, Made objects, Historic, Community organisation, Hub, Virtual outputs, Mobility, Open spaces, Worship). The main area shows a map of Edinburgh with numerous colored dots representing different cultural entities. A legend on the right identifies the categories: Schools (black), Institutional (grey), Historic (light blue), Library (green), Community organisation (orange), Worship (red), Outdoor (purple), Open spaces (yellow), and Charity (pink). The map also includes street names like Leith, Princes Street, and Edinburgh Castle.

We download the data from the cultural and communities mapping website project
<https://www.edinburghculturalmap.org/>

Data documents about Edinburgh culture, such as arts, bus stops, society, etc.

Our group finally choose the data related to art including public art.csv (data of sculpture), and street art.csv.



Data analysis

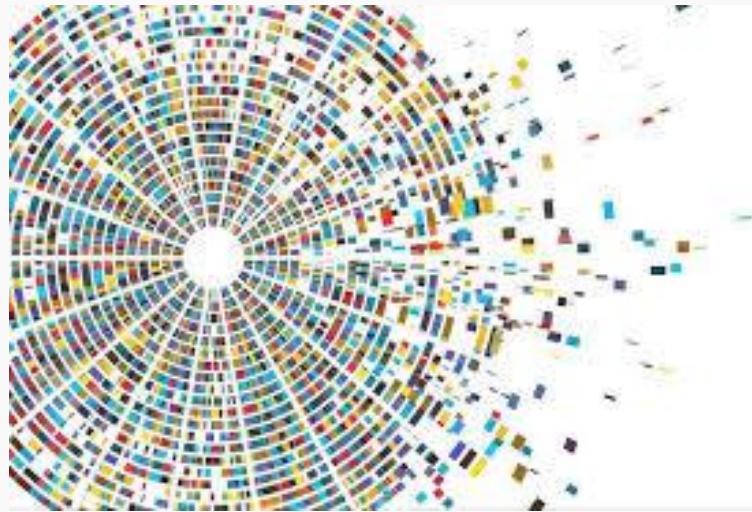
Data format:

- CSV

 Public art.csv
 Street art.csv

- SHP

 WD_2011_join_indic.cpg
 WD_2011_join_indic.dbf
 WD_2011_join_indic.prj
 WD_2011_join_indic.qpj
 WD_2011_join_indic.shp
 WD_2011_join_indic.shx
 WD_2011_join_indic.zip



Analysis tools:

- Python
- JavaScript
(Timeline.js)
- Arcgis



Analysis Methods - Python

Python: Pandas, Numpy, Geopandas, Folium, Seaborn

Data Cleaning (Pandas, Numpy)

The screenshot shows a file explorer interface with four CSV files listed:

- Publicart final1700.csv
- Publicart final1800.csv
- Publicart final1900.csv
- Publicart final2000.csv

The file "Publicart final2000.csv" is highlighted with a red circle and an arrow points from it to a preview window below.

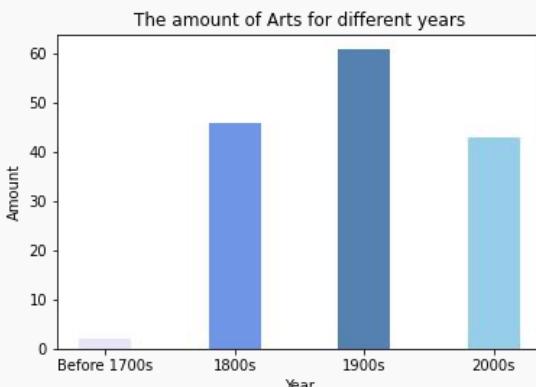
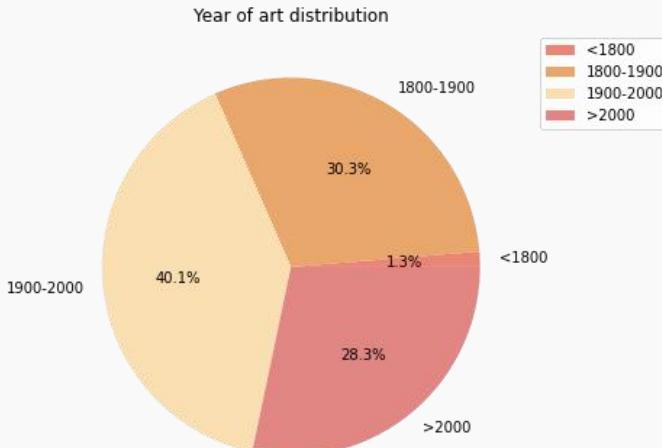
The preview window displays the following table:

Name	y	x	Date	Sort
Stones of Scotland Circle	55.9549	-3.1745	2002.0	Public art
Memorial to Robert Louis Stevenson	55.908597	-3.256297	2013.0	Public art
Memorial to Army pipers killed in conflict	55.909542	-3.249274	2013.0	Public art
Alan Breck Stewart & David Balfour. Characters from Kidnapped	55.94503	-3.249841	2004.0	Public art
Nils Olav (penguin soldier)	55.944117	-3.271337	2005.0	Public art
The Cramond Fish	55.979722	-3.294227	2009.0	Public art
6 Times	55.9836	-3.17636	2010.0	Public art
Dreaming Spires	55.956344	-3.186225	2005.0	Public art



Analysis Methods - Python

Data Analysis (Seaborn)

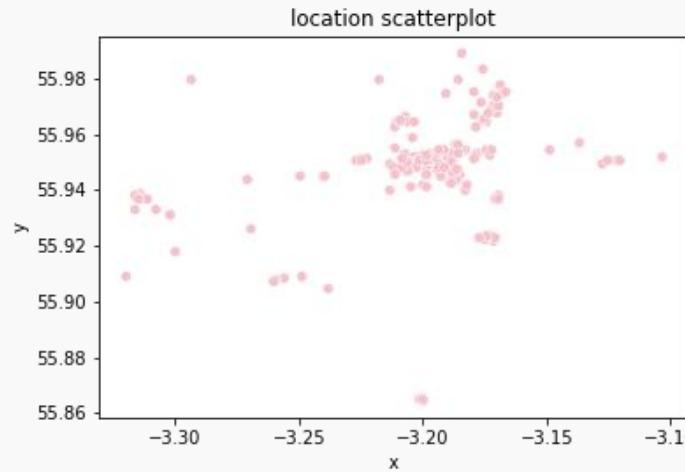
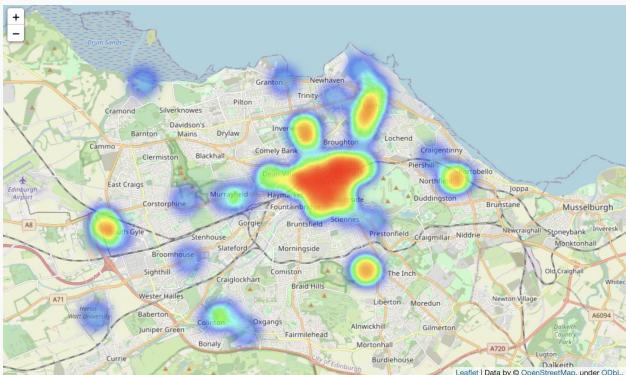
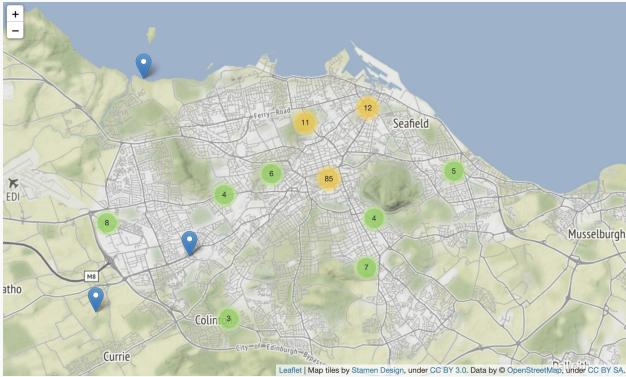


- The 20th century saw the most public art (40.1%).
- Public art before the 19th century made up only 1.3% of the total.
- The number of newly established public arts increased with each century.



Analysis Methods - Python

Data Analysis (Seaborn, Folium)



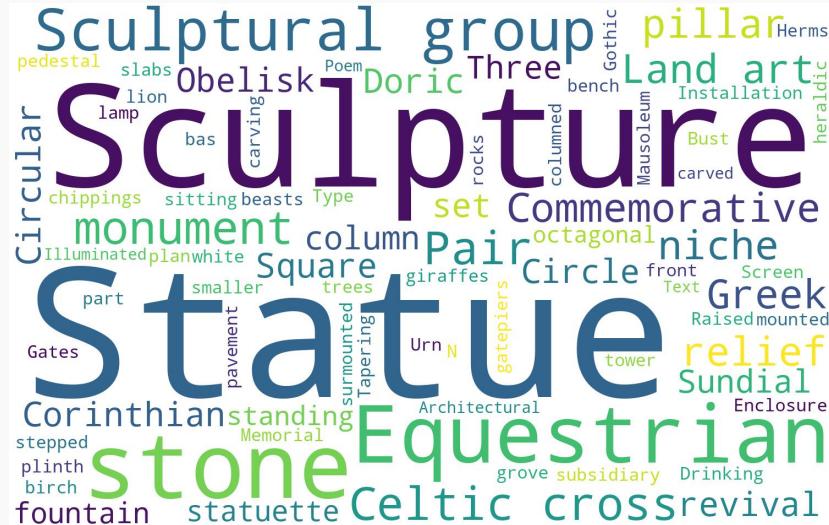
The geographical distribution of public art in Edinburgh. From this location scatterplot, we find that the public art are concentrated mainly in the ‘city centre’.

After the data analysis, we try to use our physical map show the distribution of public art throughout Edinburgh and choose city center to show the specific times for each public art.



Analysis Methods - Python

Data Analysis (Seaborn, wordcloud)



Our data set describes the different types of public art in the form of words. In this way, we use the word cloud to do the data analysis.

From this wordcloud, we can find that the most common type of public art in Edinburgh is sculpture, statue, sculpture group, stone and monument.

Demo

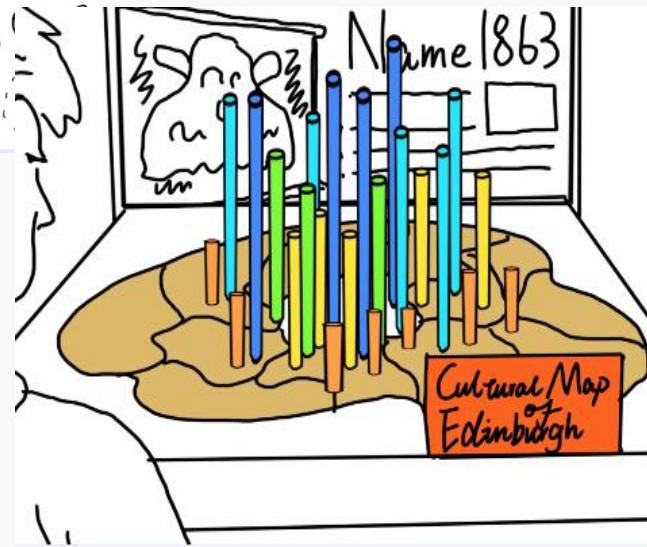
Story board

(1) Kevin is a new tourist in Edinburgh. He went to the museum to learn about this place.



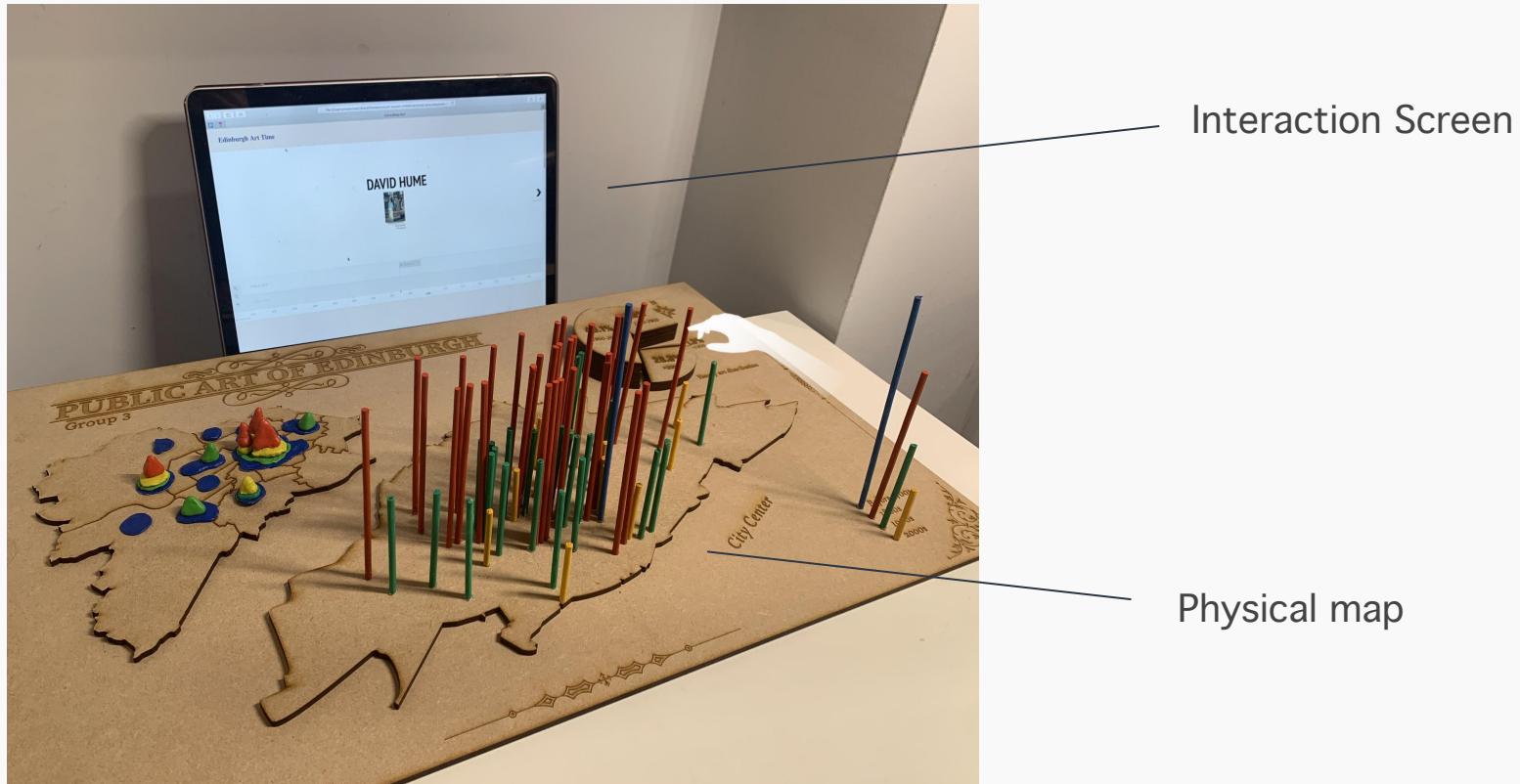
(2) He found the 'Edinburgh Art Time' and learn more about the public art distribution and its development history.

(3) He touch the coloms which represents a public art in city center and see more detail information in the interactive screen.

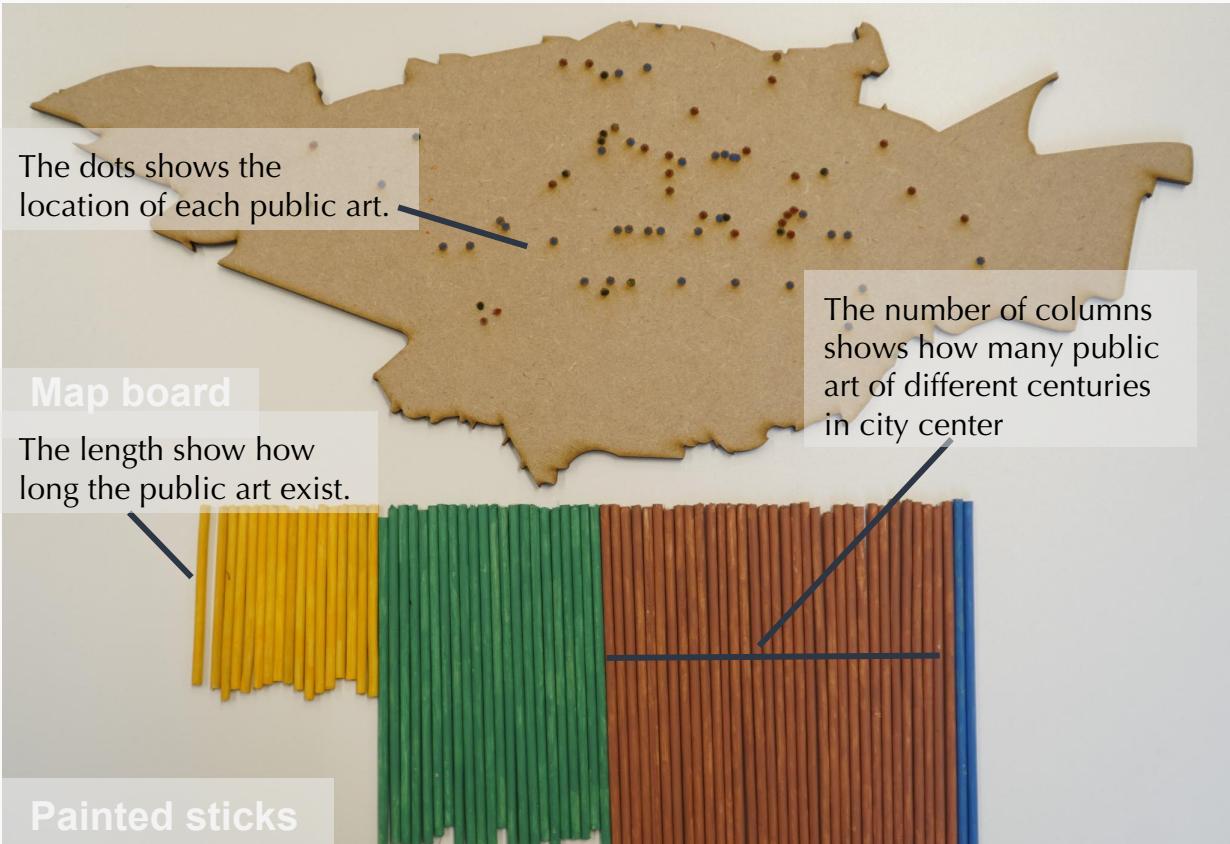
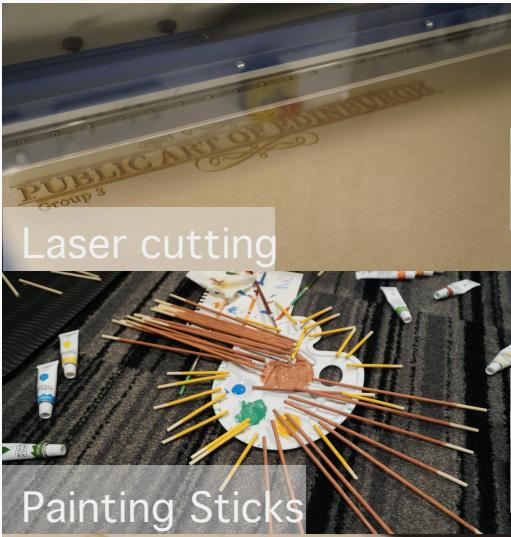


Demo

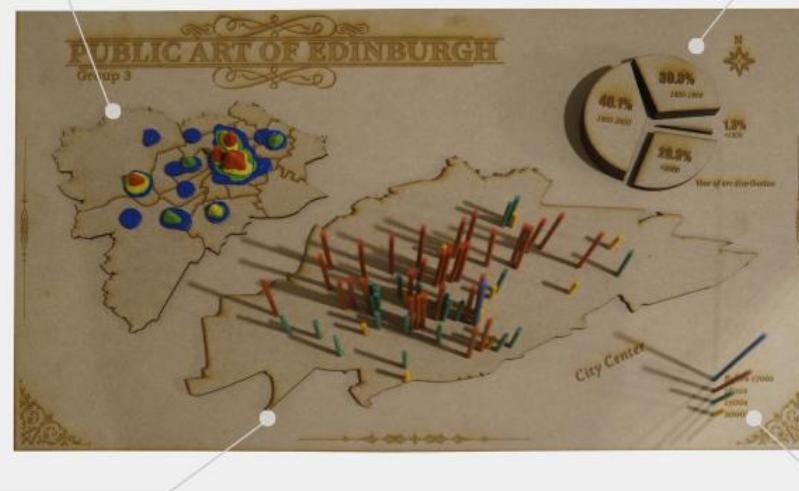
Our prototype is mainly composed of two parts parts: Interactive screen, physical map



Physical map —— making process

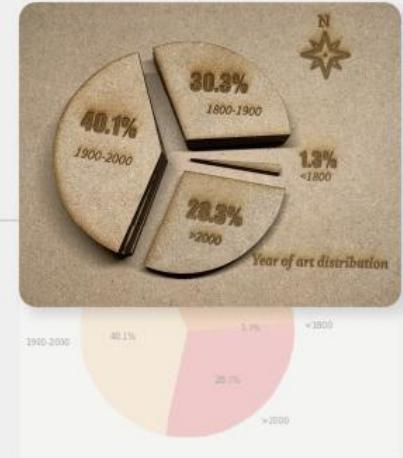


Physical map —— detail imformation



Time distribution

Period	Percentage
Before 1800	1.3%
1800-1900	30.3%
1900-2000	40.1%
>2000	28.3%



Interactive Screen

To order to improve the interactivity for the audience and show them more information of public art in Edinburgh, we link the interactive screen to our physical map.



The cover page features a collage of three images: a couple sitting on a grassy hill overlooking the city, a colorful row of buildings, and a historic building.

Let's Hug Artistic Edinburgh

Edinburgh is the capital of Scotland and one of its 32 council areas. Historically part of the county of Midlothian, it is located in Lothian on the Firth of Forth's southern shore.

The city's historical and cultural attractions attracts many visitors every year.

The cover page

<https://linyeru.github.io/Map/index>

Our interactive screen have 3 parts

- introduction
- Interactive timeline
- general data visualization of public art.

Technology:

aos.js, Leaflet.js, timeline.js, chart.js

Interactive Screen

Instruction



Distribution overview

Heatmap shows the space distribution in Edinburgh.

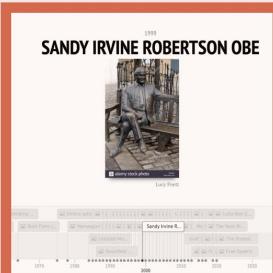
Pie chart shows the time distribution varied from different centuries in Edinburgh.



Interaction mode

Public art time in Edinburgh.

To find more details of public arts, try touch the columns on the physical model.



Details display

The website for Interactive Timeline shown in the screen unfold the details information of specific marks in public art when touching.

Part one:

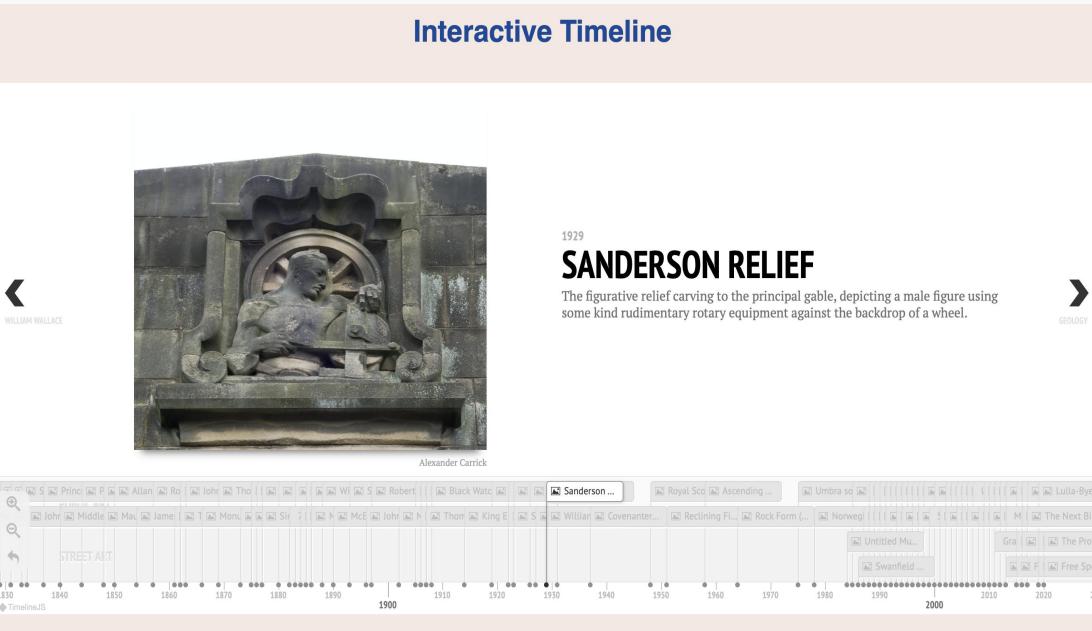
Introduce our hold project generally.

Let the audience what information our physical map will show them.

How to interact with the map and give some more details of each public art in city center.

Interactive Screen

Interactive Timeline



A screenshot of an interactive timeline application. At the top, there's a header bar with a back arrow, the title "Interactive Timeline", and a forward arrow. Below the header is a large image of a stone relief sculpture of a figure with mechanical components. To the left of the image is a small text "WILLIAM WALLACE". To the right is a small text "GEOLGY". The main content area has a dark background with white text. It features a date "1929" at the top left, followed by the title "SANDERSON RELIEF" in large bold letters. Below the title is a descriptive text: "The figurative relief carving to the principal gable, depicting a male figure using some kind rudimentary rotary equipment against the backdrop of a wheel." At the bottom of the content area is a horizontal timeline with years from 1840 to 2020. Above the timeline is a list of names and terms, many of which are partially visible or cut off. A small "TimelineJS" logo is at the bottom left.

1929

SANDERSON RELIEF

The figurative relief carving to the principal gable, depicting a male figure using some kind rudimentary rotary equipment against the backdrop of a wheel.

◀ WILLIAM WALLACE ▶ GEOLGY

1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010 2020

TimelineJS

Part two:

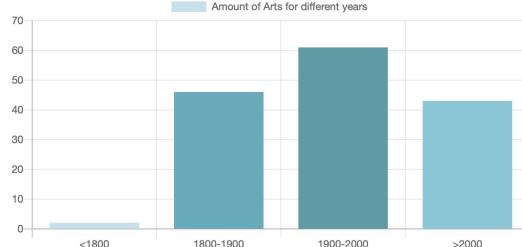
Interactive timeline

When people touch the coloum in our physical map, this timeline will automayically show the detail information of this place.

Interactive Screen

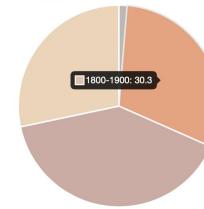
The amount of Arts

1900-2000 obtained the most the amount of newly appearance public arts while the year smaller than 1800 had the smallest number. The number of newly established public arts increased with each century.



General

<1800 1800-1900 1900-2000 >2000

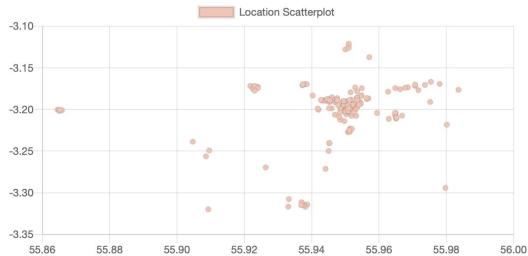


Year of Art Distribution

Most appearance of arts' year is 1900-2000(40.1%), followed by 1800-1900 with the figure of 30.3. Next came to 2000s with 28.3%. The year smaller than 1800 is the least with 1.3%.

Location Distribution

The location of arts in Edinburgh is mainly with longitude of 3.2 and latitude of 55.95. And they mainly concentrated in City Centre.



Part three:
Some data visualizations



Reflection - Future work

 1. Considering the cardboard size limitation, we only show the public art time map of the city center in detail. In the future, we can extend it to the entire Edinburgh area.

 2. We just make the prototype to link the screen to our physical map. We hope to do further work to make it become a reality.



3. There are still some missing data for the existing year of the public arts in the data set, which need further exploring.

Thank you for listening

