

National Gallery Of Art Data Analysis

SQLite database creation

Data analysis using SQL

Visualizations using Python

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Project Objective

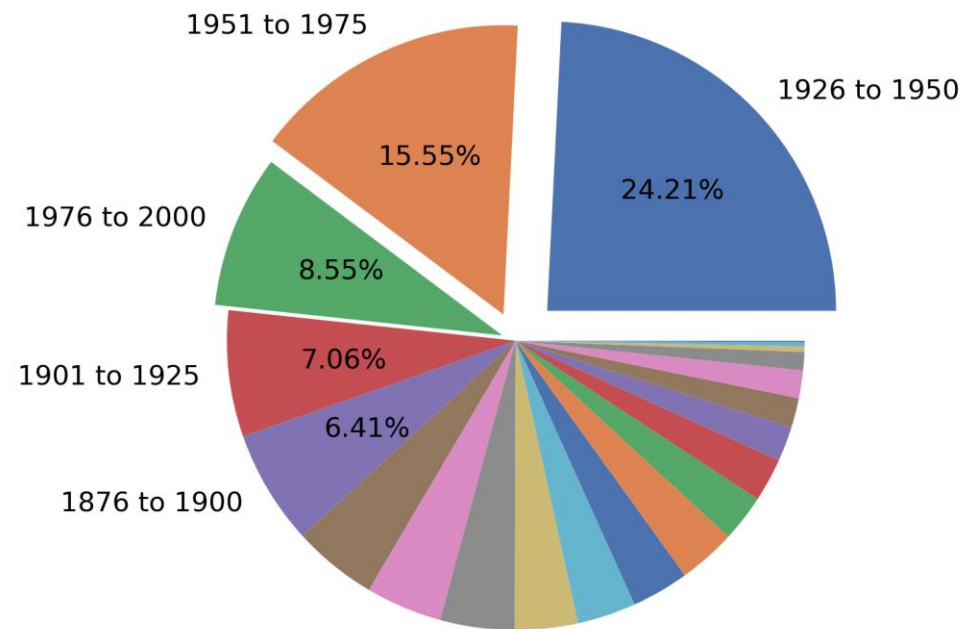
- Data is from the National Gallery of Art (NGA) [open data program](#)
- Create SQLite database using CSV files and Entity Relationship Diagram (ERD)
- Perform data analysis using SQL to answer proposed questions
- Visualize results using Python

Challenges

- Some foreign keys reference tables that **do not exist**, as stated in provided Data Dictionary
- Data Dictionary, CSV files, and ERD sometimes **do not match**
 - *Example: no CSV file for “objects_altnums”, found in ERD*
- Some columns that were supposed to be foreign keys **do not match** primary key data
 - *Example: “constituents_text_entries” to “constituents”*
- **Duplicates** found in what was supposed to be primary key, which also prevents foreign key references
 - *Example: “preferred_locations_tms_locations” to “preferred_locations”*

i. Timeframe of Artworks

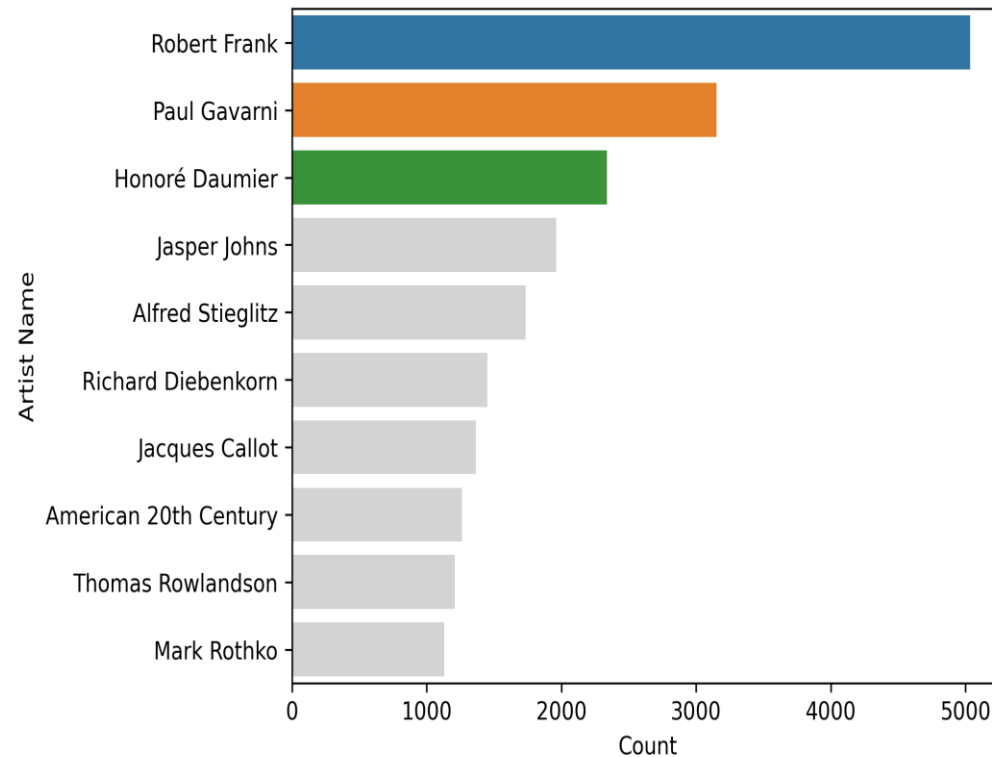
What timeframe or time period are most of the artworks created from?



Timeframe with the most artworks created was **1926 to 1950 (24.21% of total)**

ii. Prolific Artists

Who are the artists with the most works at the NGA?

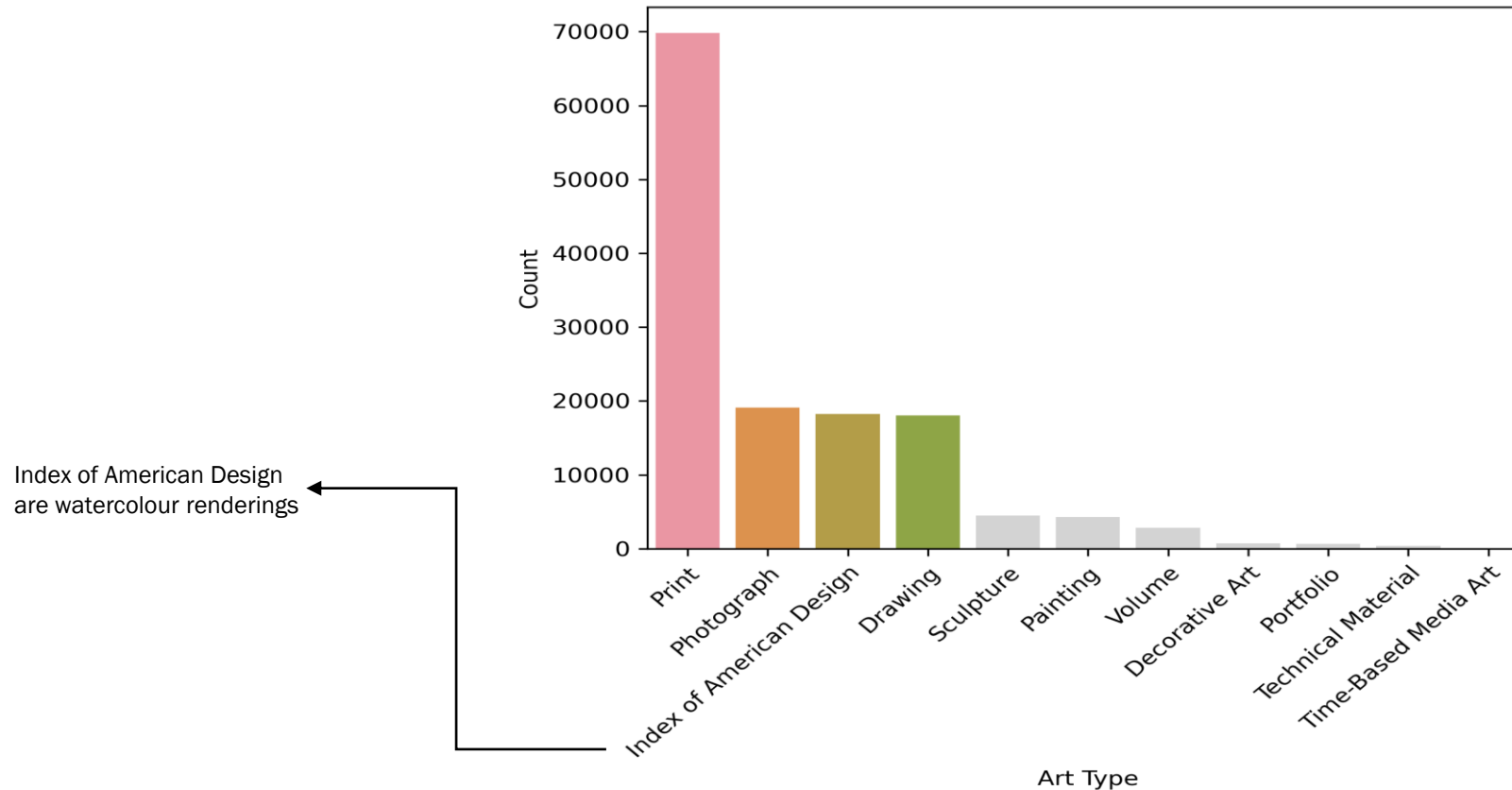


Note: Only top 10 artists shown

The top 3 artists with the most art work: **Robert Frank, Paul Gavarni, Honoré Daumier**

iii. Artwork Types

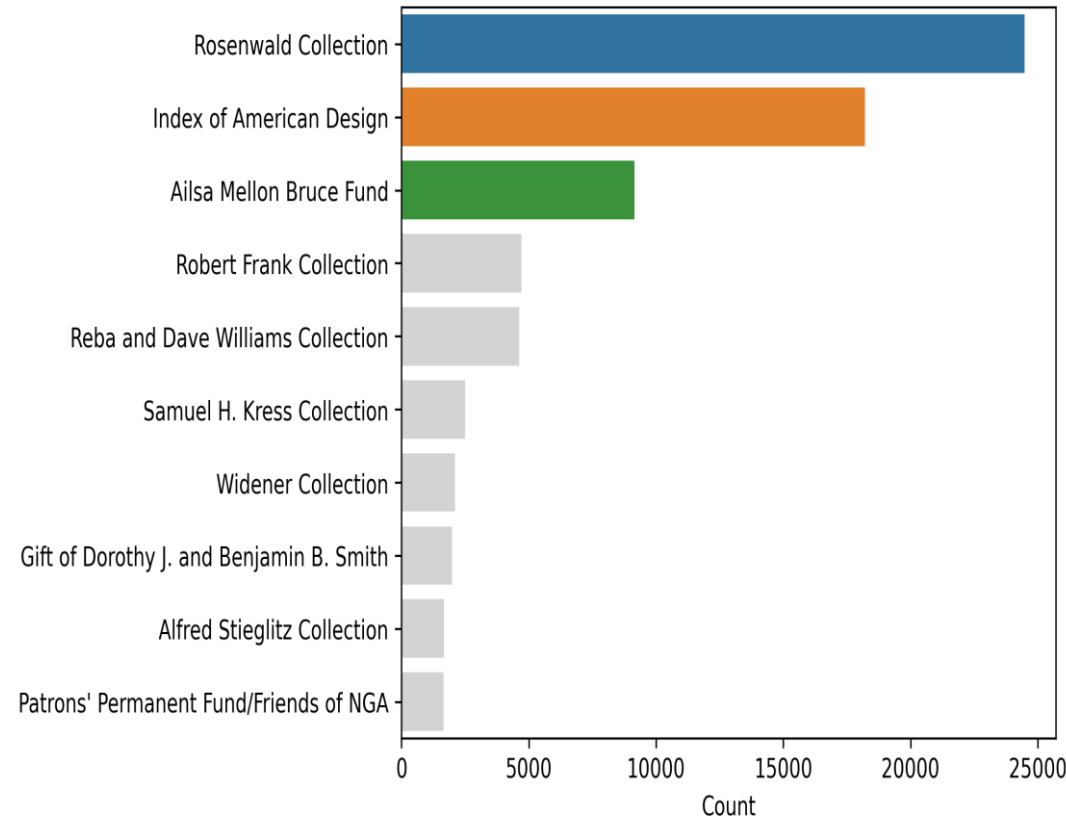
What is the breakdown of the types of artworks in the NGA collection?



Majority of artworks are **print (50.36%)**, followed by **photographs (13.79%)**, **watercolour renderings (13.16%)**, and **drawings (13%)**

iv. Origins of Artworks

Where were most of these artworks sourced from?

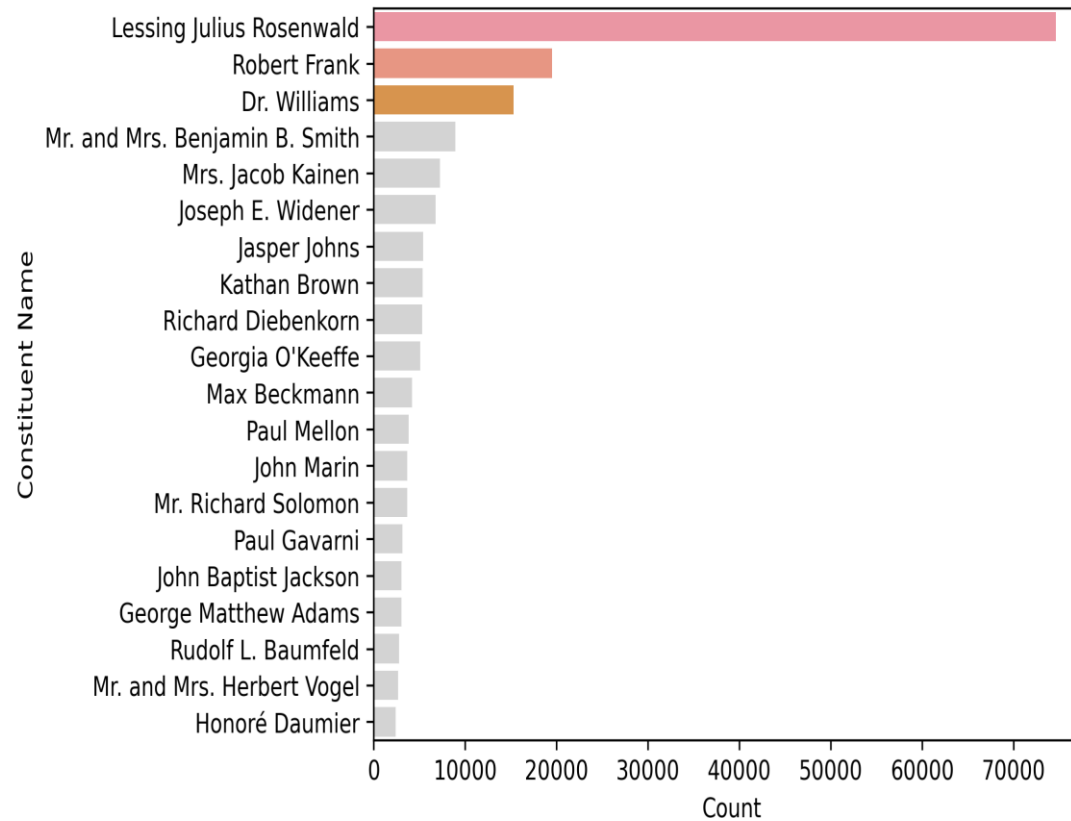


***Note:** Only top 10 sources shown*

Top 3 sources: Rosenwald Collection (17.65%), Index of American Design (13.13%), Ailsa Mellon Bruce Fund (6.6%)

v. Top Constituents

Who are the most active constituents to the NGA?



Note: Only top 20 constituents shown

Top 3 most active constituents: Lessing Julius Rosenwald, Robert Frank, Dr. Williams

vi. Canadian Artists

How many Canadian artists are represented in the NGA collection?

- There are **47 Canadian artists**

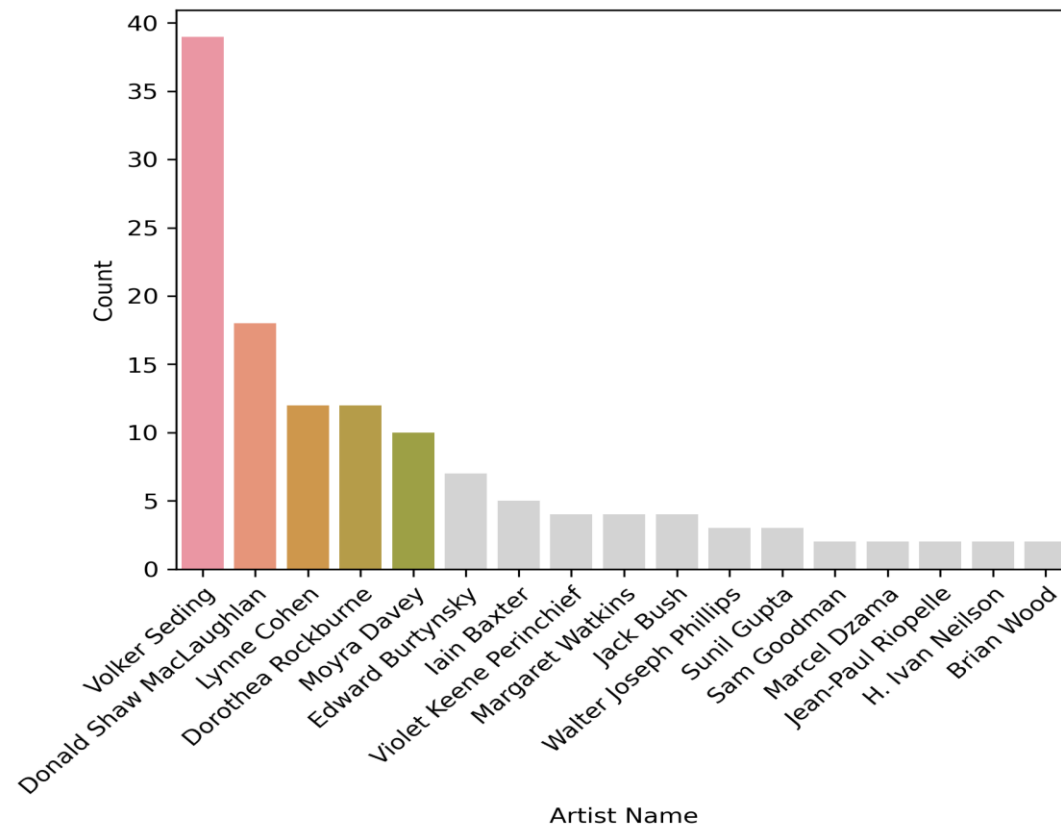
vii. Canadian Artworks

How many total art pieces are attributed to Canadian Artists?

- There are **154 total pieces**

viii. Attributed Artworks per Canadian Artist

How many art pieces are attributed to each Canadian artist?



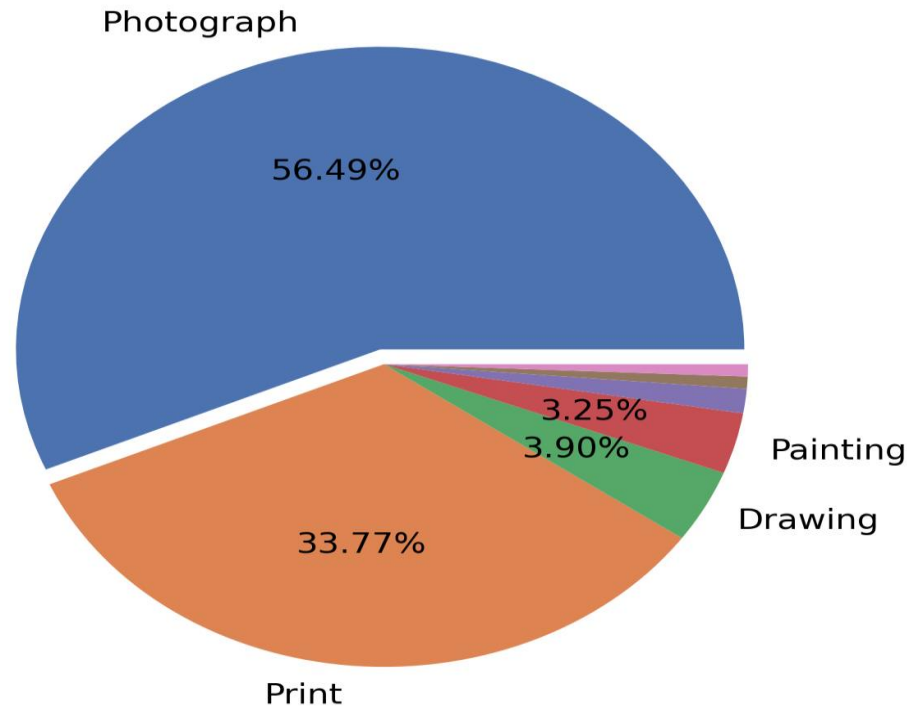
Top 5:

1. Volker Seding – 39 pieces
2. Donald Shaw MacLaughlan – 18 pieces
3. Lynne Cohen – 12 pieces
4. Dorothea Rockburne – 12 pieces
5. Moyra Davey – 10 pieces

***Note:** Artists with only 1 piece are not shown on graph*

ix. Types of Canadian Artworks

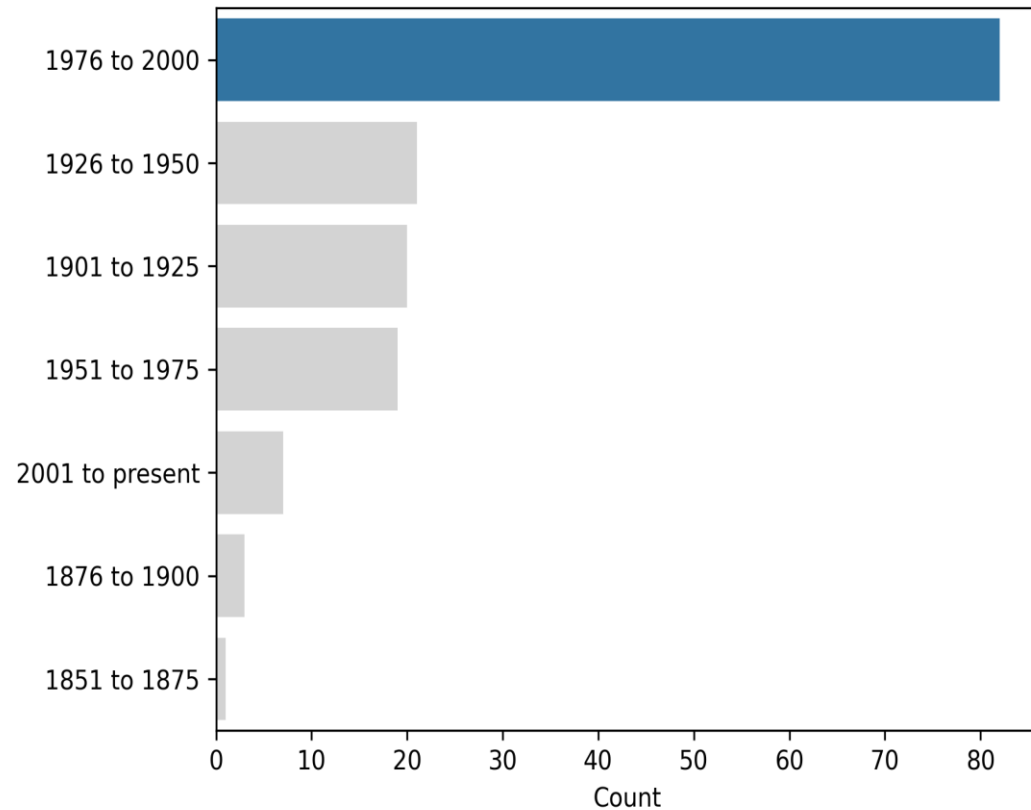
What is the breakdown of the types of artworks by Canadian artists?



Majority of Canadian artworks composed of **photographs (56.49%)**, followed by **print (33.77%)**. The other types make up a very small proportion.

x. Time Period of Canadian Artworks

In which time period were these artworks by Canadian artists predominantly created?



Most artworks by Canadian artists created between:

- 1. 1976 to 2000 - 82 pieces**
- 2. 1926 to 1950 - 21 pieces**
- 3. 1901 to 1925 - 20 pieces**
- 4. 1951 to 1975 - 19 pieces**

Oldest Canadian artwork?

Artist: Charles Caleb Ward

Title: His First Appearance in Public

Art Type: Painting

Created: 1870

Link: <https://www.nga.gov/collection/art-object-page.126485.html>

Latest Canadian artwork?

Artist: Laura Letinsky

Title: Untitled #7

Art Type: Photograph

Created: 2009

Link: <https://www.nga.gov/collection/art-object-page.218000.html>