pool party ®

A knowledge-based Recommender for the Rijksmuseum Artworks

Digital Humanities and Cultural Heritage

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Rijksmuseum Collection

▶ Provided as RDF

▶ Annotated using Iconclass:

  ▷ Describes artwork content

  ▷ Iconographic view

  ▷ Meaning

Describing Artworks with Iconclass

▶ Iconographic descriptions

▶ High expressivity

▶ Meaning of artwork content

▶ Expert vocabulary for art historians

Understanding Iconclass Annotations

▶ Only few concepts because of high expressivity

▶ Difficult to understand because intended for experts

▶ Difficult for non-experts to compare artworks

Recommending Artworks with Iconclass

▶ Similarity based on iconographic hierarchy

▶ Navigate within the iconographic meaning

▶ Only few navigation options because of high expressivity

Example: Still Life

- Title:

- [Still Life with Game and a Greek Stele: Allegory of Autumn](#)

- Annotated with Iconclass concepts:

  - [autumn, fall, 'Autumnus'; 'Autunno' (Ripa)](#)

  - [hunting trophies](#)

Expanding the Artwork Descriptions

- ▶ Describe artwork content with a general vocabulary

- ▶ Better understandable by non-experts

- ▶ View on artwork content:

  - ▷ Different

  - ▷ Additional

  - ▷ Interlinked

- ▶ More options for similarity and navigation

Describing Artworks with AAT

▶ A general vocabulary for describing artworks

▶ Contains a lot of different concepts:

  ▷ Physical Objects and Attributes
  ▷ Abstract Concepts
  ▷ Styles and Periods
  ▷ Groups and Organizations
  ▷ Activities
  ▷ Materials

Art & Architecture Thesaurus® Online

Describing Artworks with AAT

▶ We do not describe artworks directly

▶ Describe Iconclass concepts using AAT concepts

▶ Create links between Iconclass and AAT

▶ Can expand artwork descriptions automatically
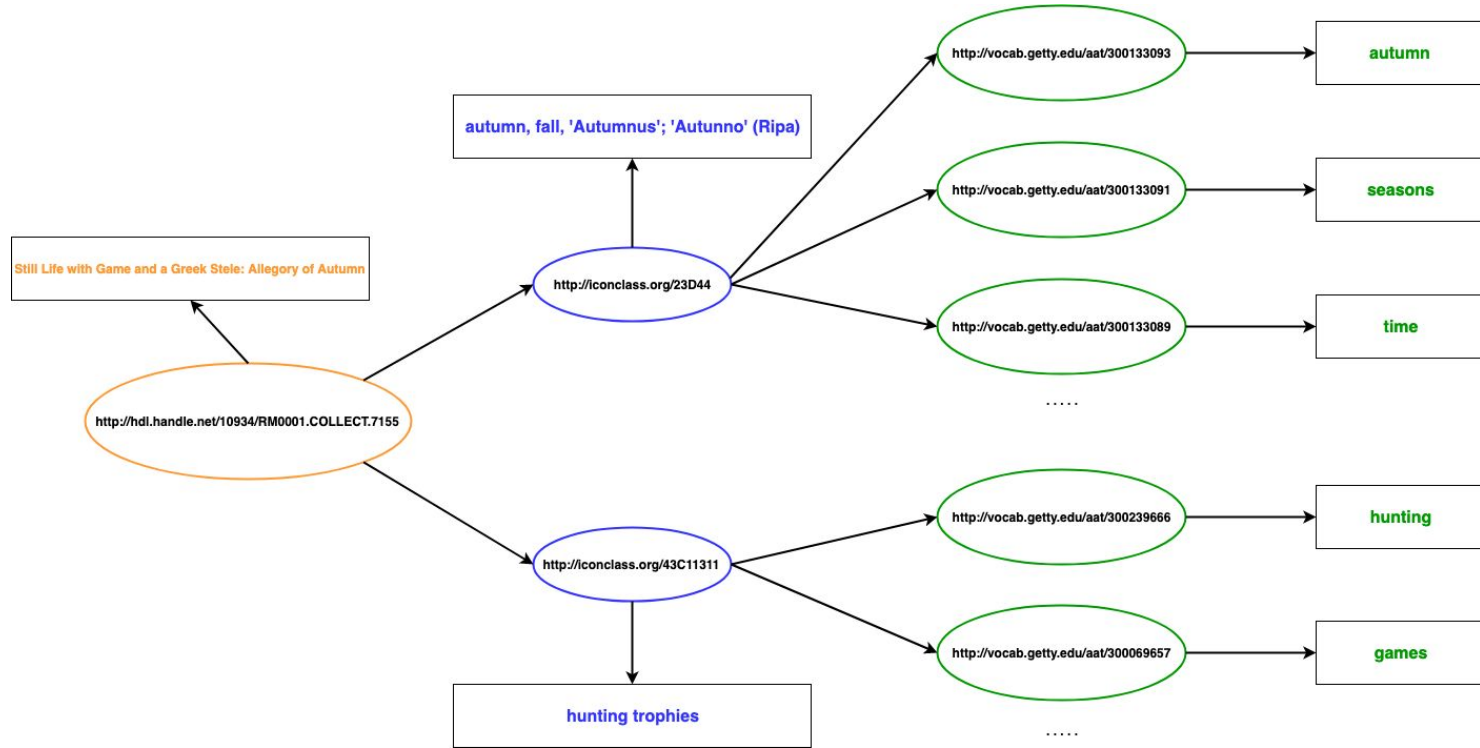
▶ Independent of the artwork collection

Interlinking Iconclass and AAT

- Interlink concepts of Iconclass and AAT

- Link means the AAT concept describes the Iconclass concept

- Links were disambiguated based on:

  - Terms describing Iconclass concepts

  - Broader concepts in the AAT hierarchy

Example: Still Life

▶ Expanded AAT concepts:

▶ Nature
▶ Animalia (kingdom)
▶ occupations (livelihoods)
▶ occupations (armed conflicts)
▶ hunting
▶ carcasses (ammunition)
▶ seasons
▶ personification
▶ time
▶ still lifes
▶ culture

▶ games
▶ autumn
▶ societies
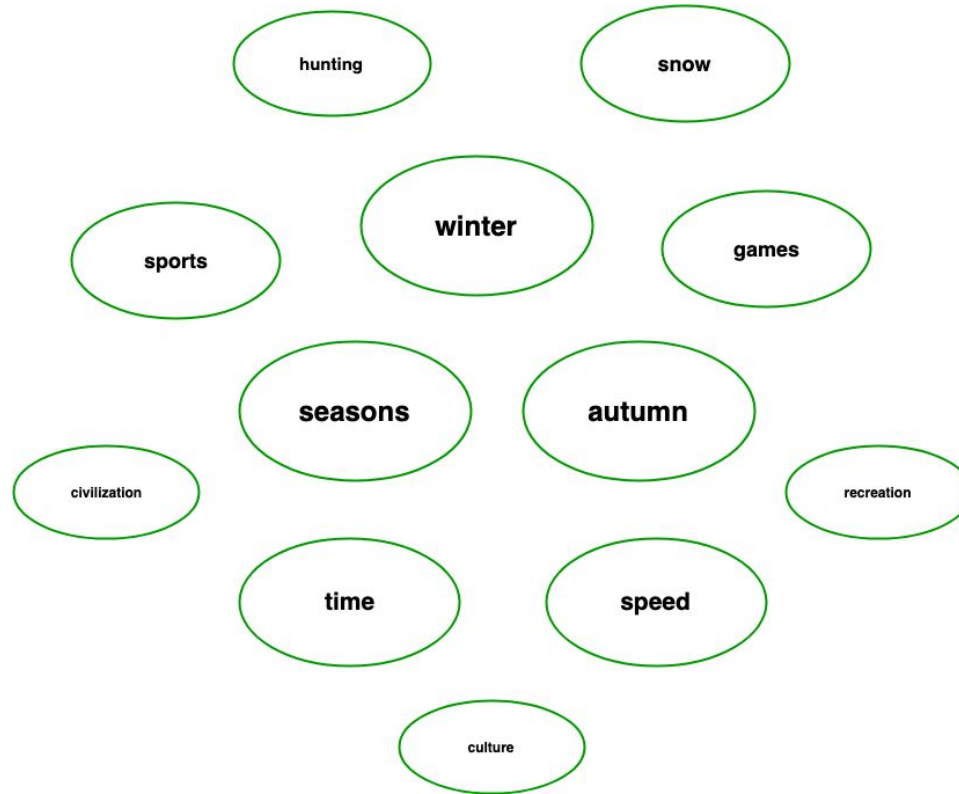▶ civilization
▶ recreation
▶ exercises
▶ sports

Scoring interlinked Concepts

Represent the importance of concepts as a score:

- Based on the interlinks between Iconclass and AAT

- Independent of the collection items

- Based on Information Content:

  - The further down in the hierarchy, the more relevant

  - If low number of interlinks, then more important

  - But only linked concepts contribute to score

Example: Still Life

Summary

▶ Different views on artwork content

▶ More navigation options

▶ Relevancy as an explanation

▶ Relevancy for improved similarity

▶ Independent of the collections

▶ Independent of user input

▶ Automatic calculation

Problems

- Linking of completely different vocabularies is difficult

- False positives provide wrong explanations

- False positives influence scores

Future Work

▶ Improve interlinks

▶ Selective recommender for navigation

  ▷ User selects some concepts

  ▷ Similarity is calculated based on selection

▶ Combine both Iconclass and AAT for similarity retrieval

Connect

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