

Exploring ornament collections

demonstration of the ROli website

2025-06-19

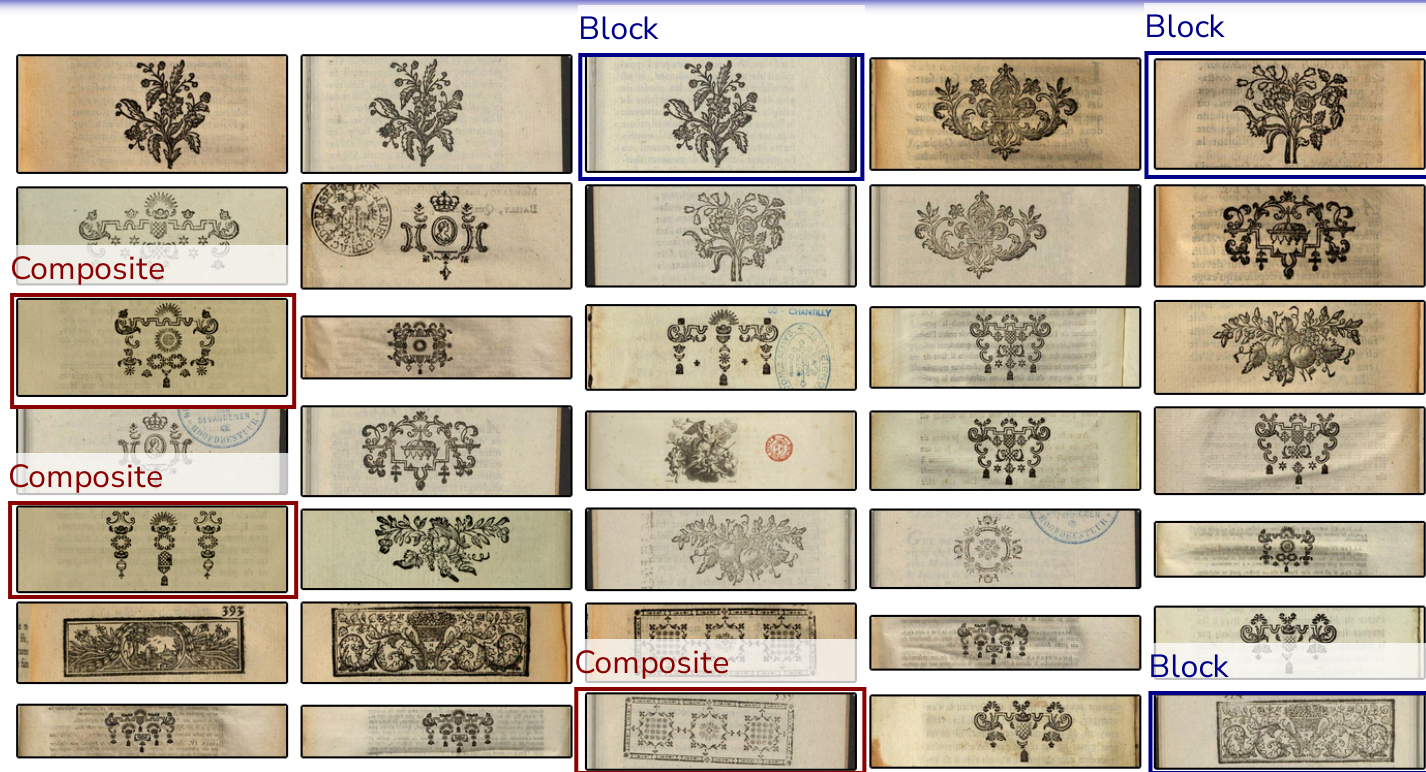
Rémi EMONET

Computer vision for the investigation of ornaments and ancient documents

Overview

- What is an Ornament?
- Demonstrator Features
- Conclusion and Openings

What is an Ornament?



An Ornament, for the Demonstrator



- Image-related information
 - full page, [full-width crop](#)
 - [exact bounding box](#)
- Metadata
 - date, title, author(s), editor(s)
 - genre (fleuron, banner, ...), nature (composite?), type (Auth., Fake, etc.)
- External data
 - VISE data (neighbors, set, etc.)
 - decomposition data

Disclaimer: these are only the inputs of the demonstrator

The production of all these elements will be presented in following presentations.

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Demonstrator Features

Disclaimer!

The website is (mostly) in French.

- many books in french in the database
- low amount of text
- translation of the main pages will be available

The website can be ugly

- sometimes for UX reasons (gaining space)
- sometimes a lack of taste and skill

Exploring the Ornament Dataset

- Static webpage
 - data files loaded once, no requirement for a server
 - state saved in the URL or in the browser

Home ; Explore ; Metadata ; Sorted



Explore and Metadata



- Browse ornaments
- Filter + live stats
 - genre, nature, type, etc.
 - date
- Sort by...
- View metadata, full page, links
- Linking and back button



Saving Information Across Sessions

In-browser storage (*localStorage*)

- for customization, etc.
- saving and sharing (JSON export / import)
- easy extension to live collaboration

Config

In-browser storage




Favorites 🌟❤️ / Notes 📝✅ / feedback 🗣️💬

- Remember main UI settings (> ...)
- Add to favorites (baskets)
- Add personal notes, make (suggestions of) corrections
- View local data




Advanced Search and Filters

Advanced search

- Full-text
 - on an aggregation of the field
- On specific fields
 - authors, editors, ...



Advanced Search



- "Recherche libre"
- Advanced search

Viewing VISE Results

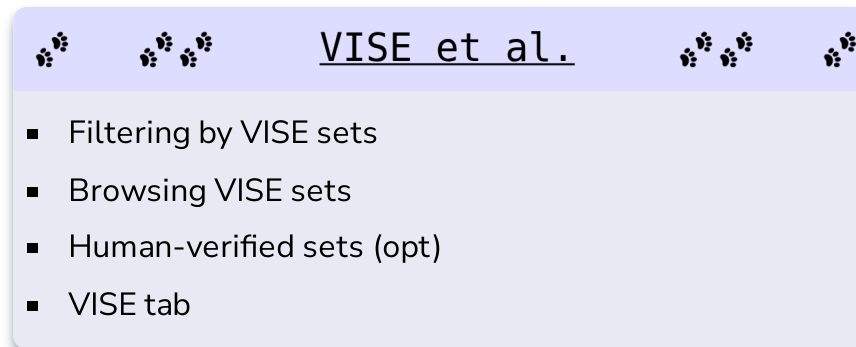
VGG Image Search Engine (VISE)

- search interface
- keypoint-based similarity scores
- ⇒ neighbors, sets (clusters), ...

ROli usage of VISE


- filter by VISE sets
- view vise neighbors
- addition: conditional representer
- addition: map of differences

VISE Tab



Pairwise Image Comparison





Image selection

- drag from any "ornament card"
- drop on 

Possibility to

- compare images in pairs in different ways
- fine tune alignment
 - offset: shift + mouse move
 - scale: control + mouse move

compare ; compare



Compare



- Modes: side by side ; slider ; opacity
- Diff mode + alignment
- Fading mode and speed control
- Other modes

Composite Ornament Decomposition

Focus on composite ornaments

- made of "vignettes"
- filter by presence of vignette
- view decomposition



Decomposition



- filtering via explore
- decomposition tab
 - only still jointly present
 - view boxes
 - toggle by clicking boxes

Image-Based Search: Uploading Your Own Image

Requires server to handle image upload, processing and interfacing with VISE.

Ways to provide an image

- select or drop a file
- paste from clipboard
- take picture (mobile)



Image-Based Search

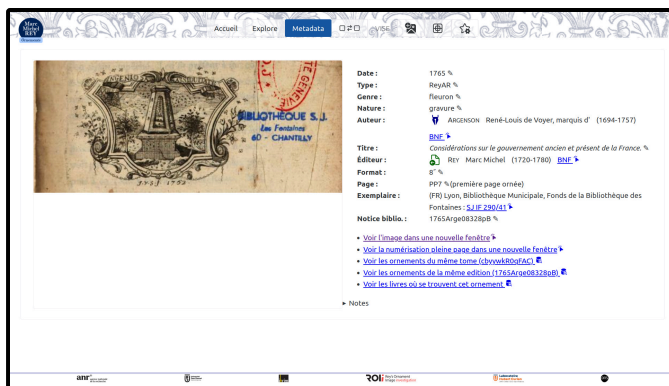
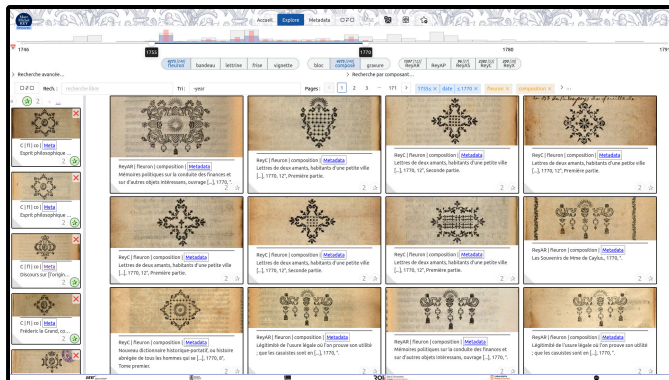


- image upload, come back to vise as intro
- view results
- conditional template

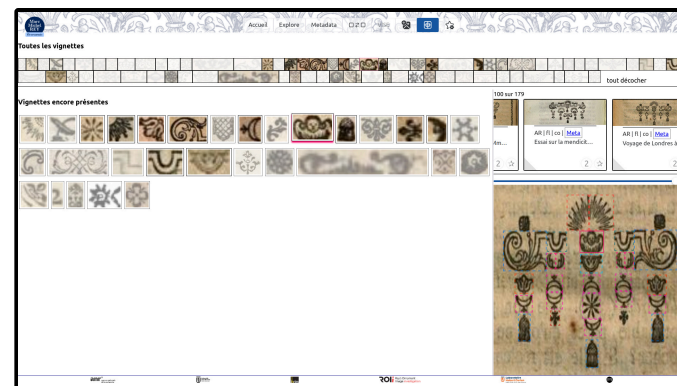
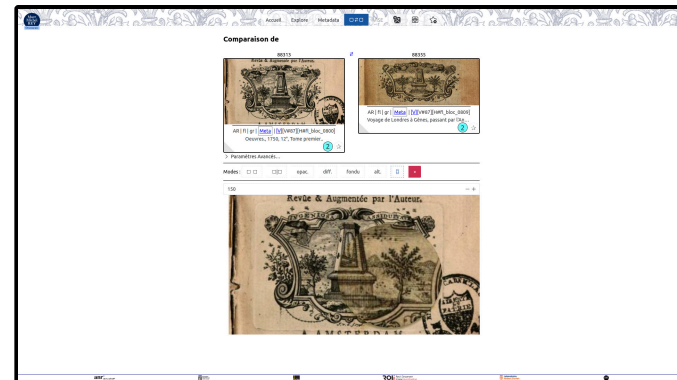
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Conclusion and Openings



+ VISE,
Image,
Baskets,
etc.



(Some) Technical Elements

- Application
 - lightweight (📁 500kB)
 - written in typescript
 - using Vue.js
 - using Naive UI
- Static data files (json)
 - main metadata 22MB (📁 1.9MB)
 - vise results 1.9MB (📁 504kB)
 - decomposition results 6.8MB (📁 1.1MB)
- Server access (optional)
 - image-based search (VISE based)
 - conditional representer

Repurposing the Demonstrator?

- 👍 Re-useable search functionality
 - flat objects, flexible
 - url history and bookmarking
 - few abstraction boundaries
 - declarative binding
- 👍 Re-useable custom components
 - date histogram
 - binding to the search
 - image comparator
- 😊 Sometimes ugly and very specific
 - data loading and parsing
 - some implicit conventions
 - hard-coded db patches (renaming, ...)
 - no i18n (internationalization)

```
// decomposition
const filterBinding: Binding = ({ LISTALLINLIST }) => {
  LISTALLINLIST('decompParts', checkedLabels)
}

const checkedLabels = ref([] as string[])

const filtered = computed(
  () => applyFilter(ornaments, getFilterObject(filterBinding))
)
```

```
// explore
const filterBinding: Binding = ({ ... }) => {
  LIST('nature', checkedNatures)
  RANGE('year', dateRangeWithNulls)
  TEXT('search', searchContent, projectForSearch)
  LISTINLIST('authors', checkedAuthorIds)
  BOOLEAN('viseSet', showNonNullViseSets, '!empty')
  LIST('viseSet', checkedViseSets) // after the boolean
  LISTALLINLIST('decompParts', checkedDecompLabels)
  ...
}
```

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Thank You! Questions?