

Image tagging (ARTigo): A game or system that allows users to identify and geolocate landmarks depicted in artworks

Group “Gutsy Gibbon” presentation 1

2018-05-03

Gregor Anzer, Fabian Braun, Florian Edelmann, Yuhao Wang

ÜBER ARTIGO

BLOG /  / 

ZUR BESTENLISTE

SUCHE

→ EINFACHE SUCHE

→ DETAILLIERTE SUCHE

SPIELE

→ ARTIGO-SPIEL 

→ ARTIGO TABOO 

→ KARIDO 

→ ARTIGO-QUIZ BETA

→ TAG A TAG BETA

→ COMBINO BETA

→ ARTIME  BETA



Haus Fenster Fassade Giebel Adler Schwert Dach

Vision

Game for improving the ARTigo database by adding landmark data

Real world use cases

- Visiting a city and looking for artwork that is related to local landmarks
→ Search by landmark
- Finding the landmark that is depicted in some artwork you saw in a museum
→ Search by artwork
- Looking for artwork depicting a specific area
→ Search by location

The game

1st stage

Does the artwork contain a landmark?

Look for tags that can indicate a landmark

Statue, City, Building, River, Castle...

Letting users decide (and validating this information)

Marking an image with “contains landmark” for example

The game

2nd Stage

Naming and geolocating the potentially depicted landmark

Google Maps API for picking locations

ESP-like game for validating the landmarks

EyeSpy, OntoPronto

The game

Difficulties

How to incentivize adding the first landmark tags to the artwork?

- Larger reward if first tag gets validated later on
- Putting more trust in users that tag images first
- Putting players in pairs, to enter and validate independently

Data

Preselect possible data: tag dictionary that indicates a landmark

Input: ARTigo database, landmark dictionary

Output: landmark(s) depicted in artworks

What makes it an HC system?

- Theoretically computationally solvable problem
- Human in the loop
- similar to ESP game
 - Output agreement
 - Visual recognition
- Worker → Requester → Computer

Incentivization

Motivation: Enjoyment -> Gamification

- Point rewards
- Time limits
- Honor badges
- Ranking
- Special gift
- Story
- Profiles for bragging

+ other target specific gamification

Overview References

ESP game-related

- “Social Tagging als Methode zur Optimierung Kunsthistorischer Bilddatenbanken - Eine Empirische Analyse des Artigo-Projektes”
- “Designing Games With a Purpose”
- **“*Improving Search Engines Using Human Computation Games*”**
- “Input Agreement: A New Mechanism for Collecting Data Using Human Computation”
- “Peekaboom: A Game for Locating Objects in Images”
- “EyeSpy: Supporting Navigation through Play”
- “Analysis of the Reputation and User Contribution on a Question Answering Website: Stack Overflow”

Overview References

Location-related

- “Geocentric Crowdsourcing and Smarter Cities: Enabling Urban Intelligence in Cities and Regions”
- “Wisdom about the Crowd: Assuring Geospatial Data Quality Collected in Location-Based Games”
- “Tour the World: building a web-scale landmark recognition engine”
- “The Role of Global and Local Landmarks in Virtual Environment Navigation”