

# ArtGuide

Adaptation



Beta version

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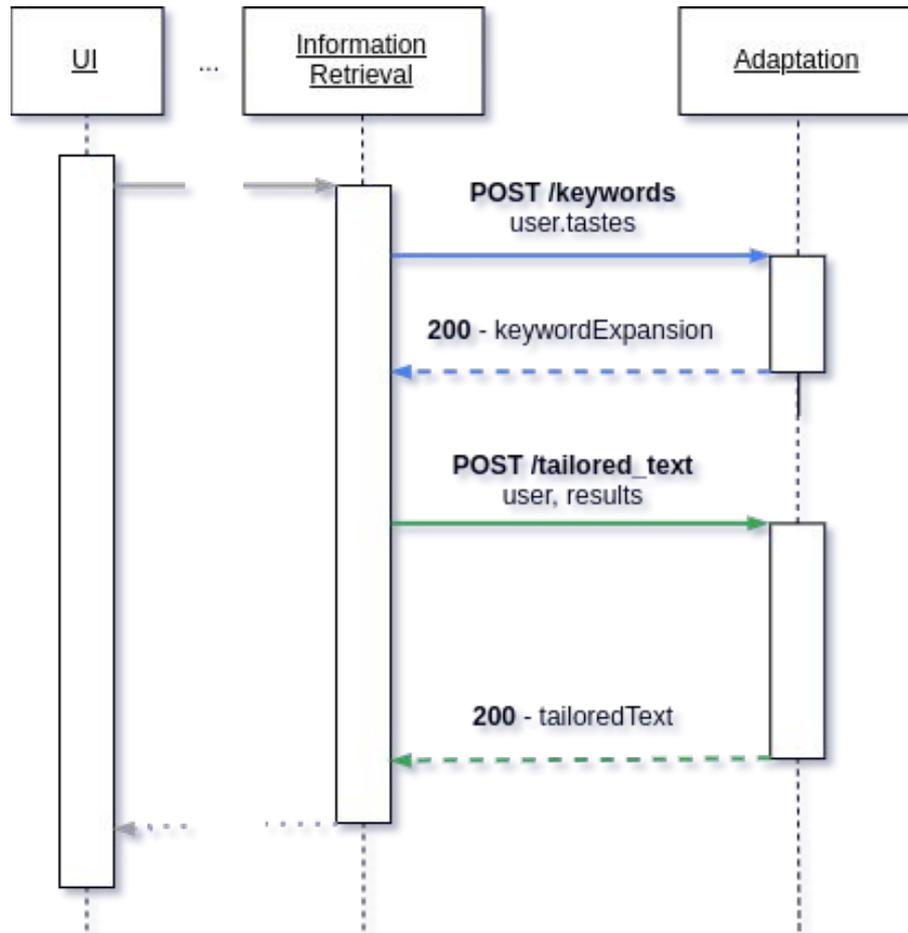
P. Lonardi, G. Martini

# Improvements for BETA

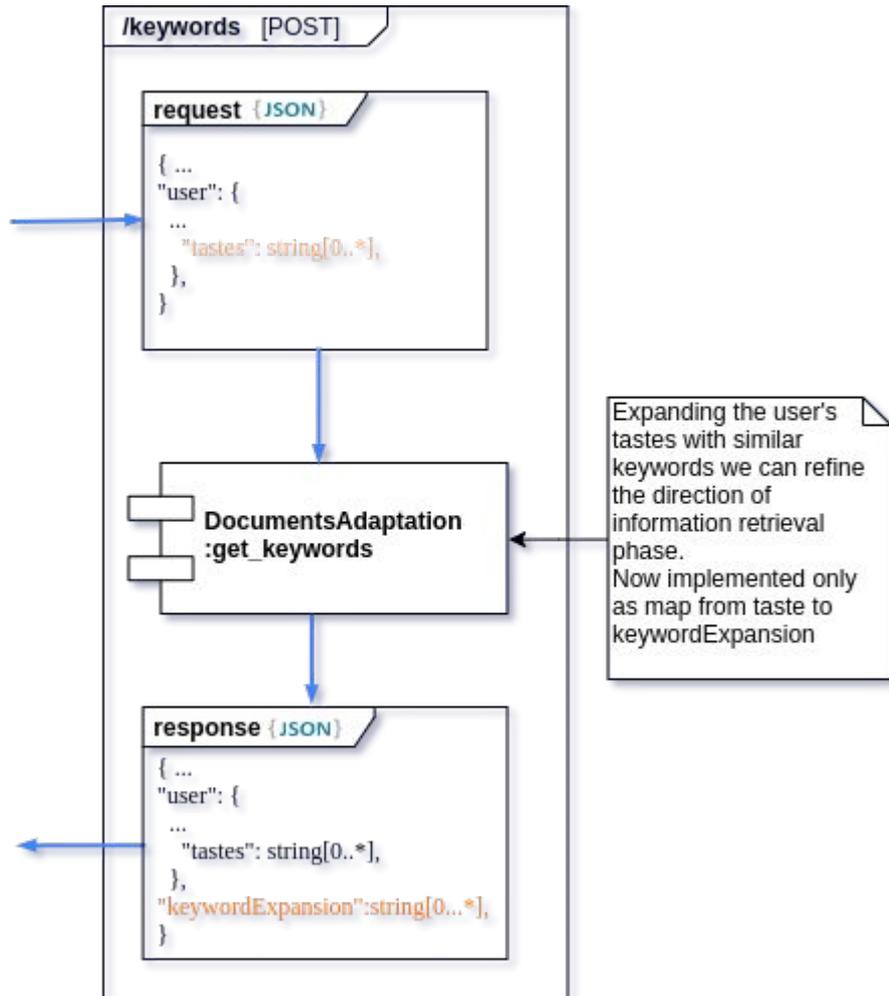
- × A9 (child - low registry)
- × A5 (expertise level)
- × C20 (expertise level)



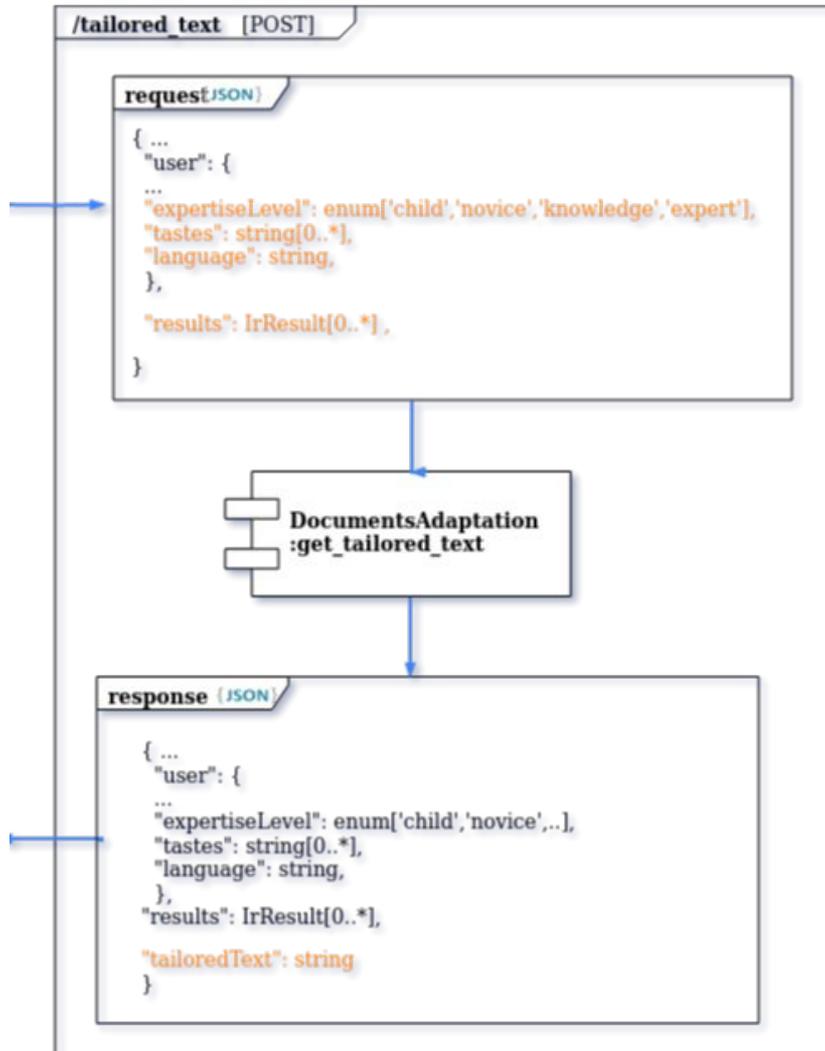
# Architecture



# Architecture

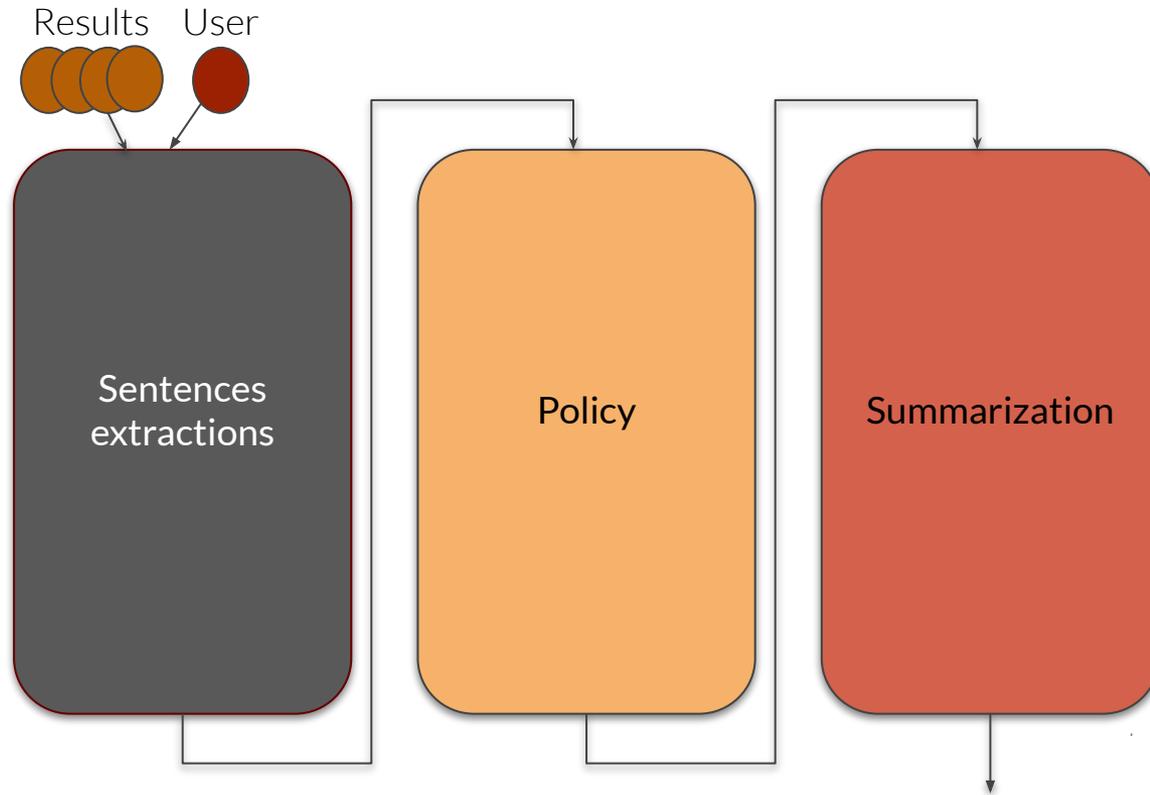


# Architecture



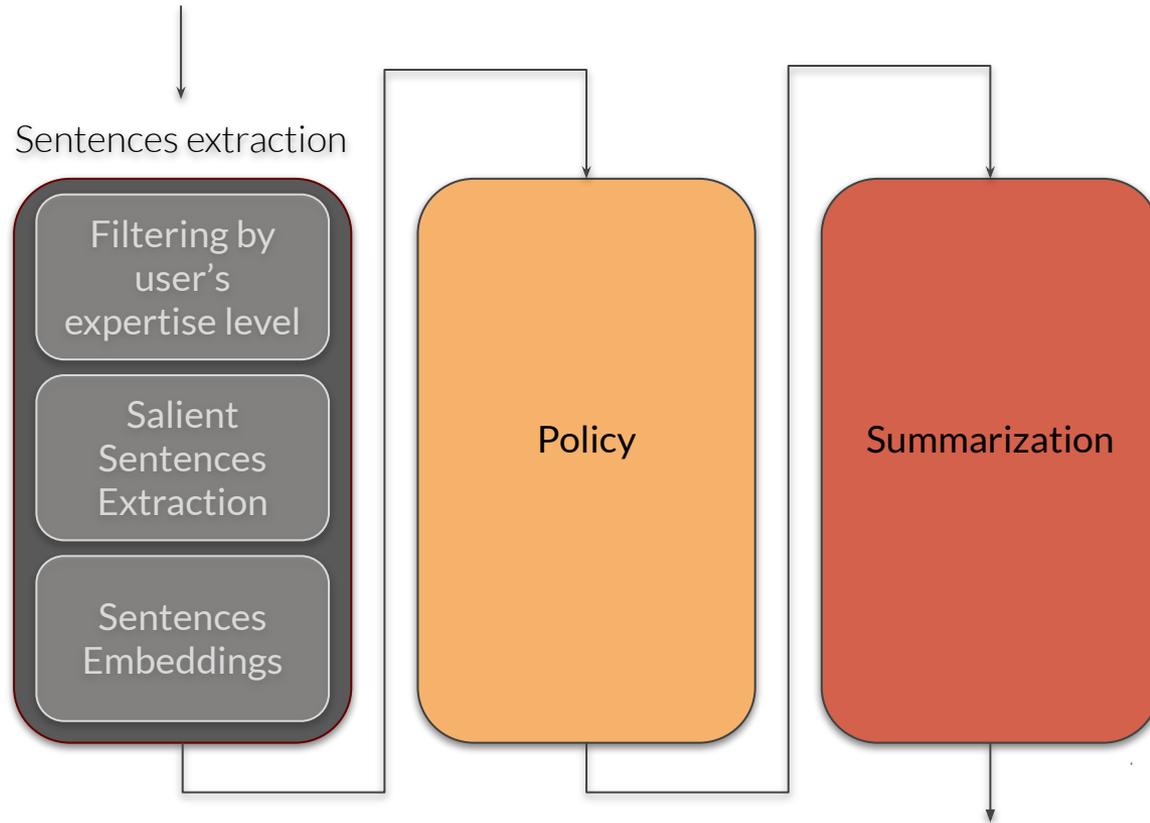
# Architecture

Tailored text



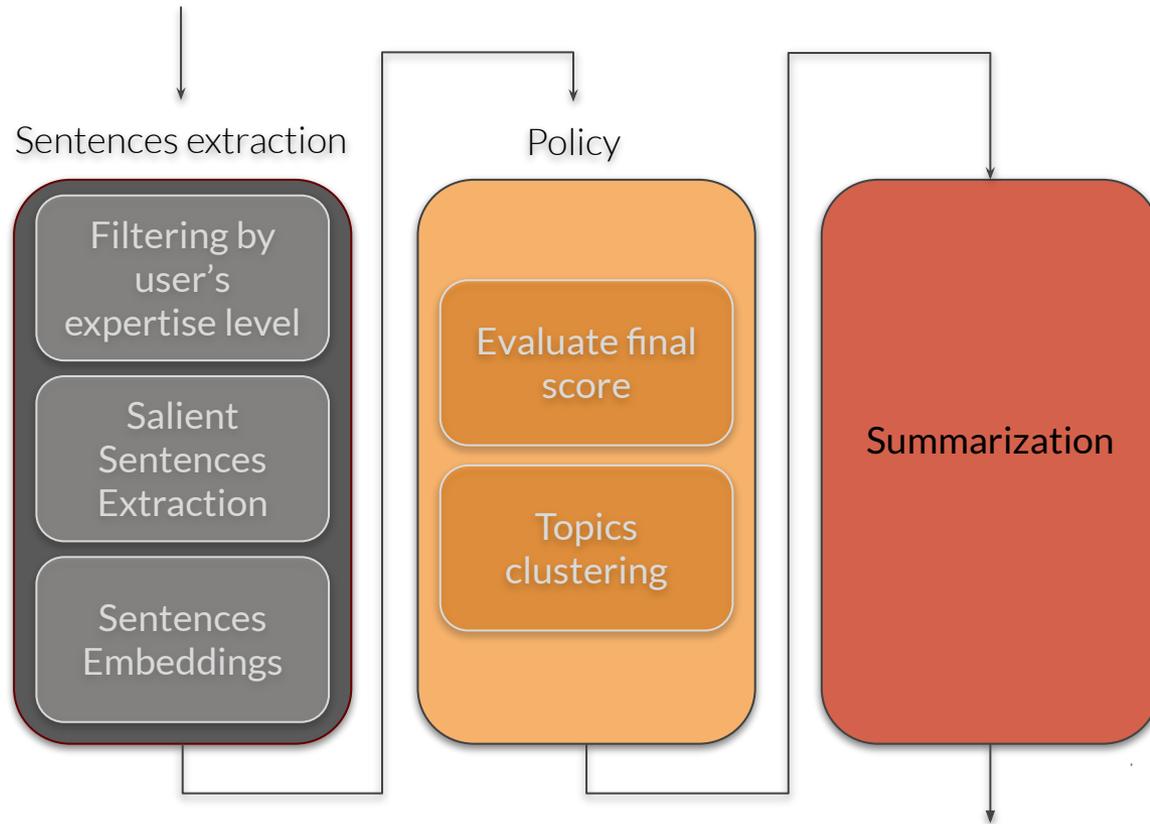
# Architecture

Tailored text



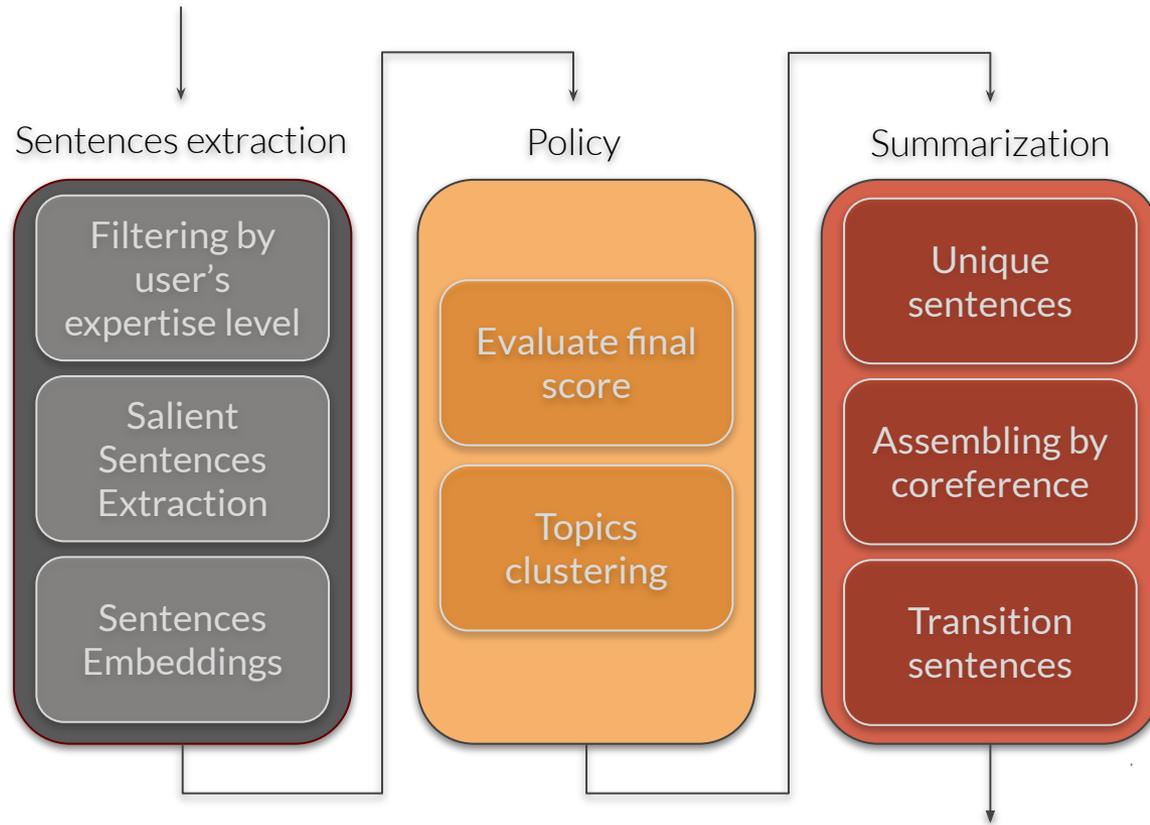
# Architecture

Tailored text



# Architecture

Tailored text



# Implementation

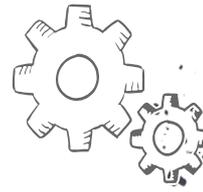
- × Spacy for sentences extraction and readability measure 
- × Using fastText embeddings for capture the meaning of the sentences on multilingual environment. 
- × Cosine distance for evaluate the similarity between keywords/sentences 
- × Huggingface pretrained models for sentences embeddings (distil-RoBERTa, distil-BERT-multilingual) 
- × Coreference evaluation with NeuralCoref 

# Future work

- × Simplex for “topic balancing”
- × Feedbacks for optimization of hyperparameters
- × Tastes expansion
- × Write more transition sentences
- × Generative summarization



# Demo



**Expertise level:** Novice

**Tastes:** History, Autor

## *Torre di Pisa*

The tower and the neighbouring cathedral, baptistery, and cemetery are included in the Piazza del Duomo UNESCO World Heritage Site, which was declared in 1987.

But the system considered as a whole is heavier than the heavy object alone, and therefore should fall faster. A 2001 study seems to indicate Diotisalvi was the original architect, due to the time of construction and affinity with other Diotisalvi works, notably the bell tower of San Nicola and the Baptistery, both in Pisa. In an effort to compensate for the tilt, the engineers built upper floors with one side taller than the other.

**Expertise level:** Expert

**Tastes:** History, Autor

## *Torre di Pisa*

A 2001 study seems to indicate Diotisalvi was the original architect, due to the time of construction and affinity with other Diotisalvi works, notably the bell tower of San Nicola and the Baptistery, both in Pisa.

The first building constructed at Campo dei Miracoli, Pisa, was the cathedral, or Duomo di Pisa, which rests on a white marble pavement and is an impressive example of Romanesque architecture. At this point, I would like to draw your attention to history: Construction was subsequently halted for almost a century, as the Republic of Pisa was almost continually engaged in battles with Genoa, Lucca, ...



# Evaluation



# Definition

## User's needs

Being guided to the comprehension of the art piece, through a description that fits his/her interests

## User's satisfaction

The user is satisfied if he gets some answers to the question he had in mind

## Measure A

- × Readability match
- × Closeness of the readability of the result to the expertise level of the user

## Measure B

- × Goodness of App wrt Search Engine
- × Time, effort, likability

## Measure C

- × Goodness of result
- × Reads till end
- × Shares the content
- × Rates the answer

# Execution

## Timing of campaign

Start: 19 December 2019

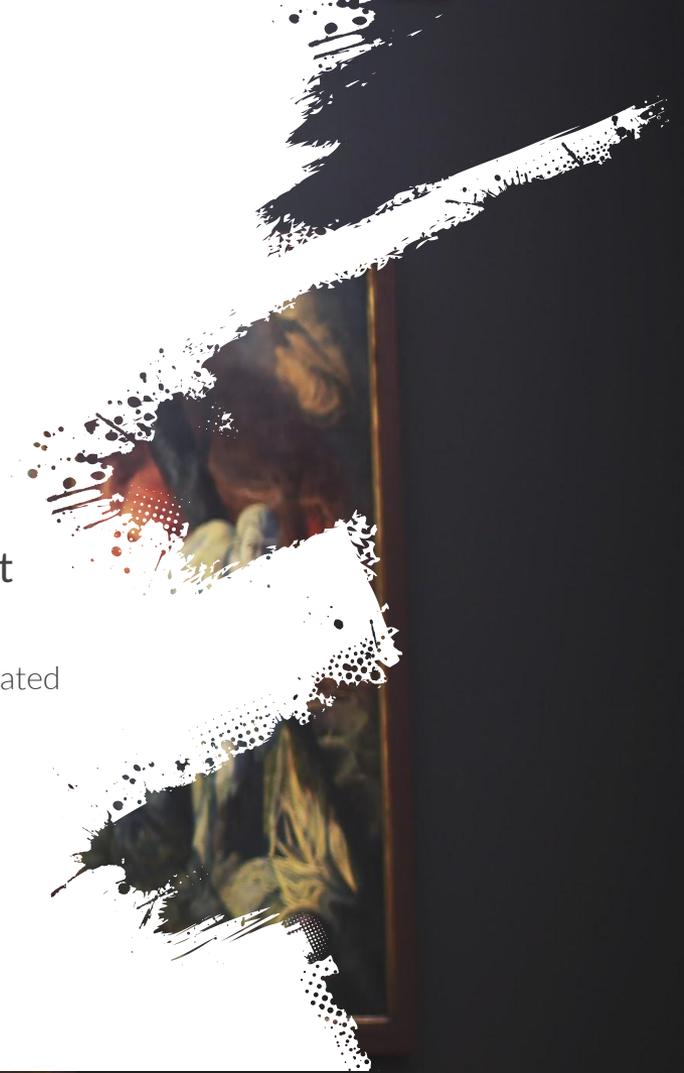
End: 7 January 2020

## Population

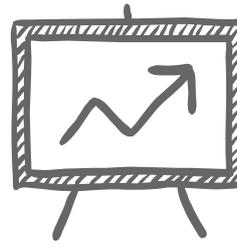
- × 100 History of art students (A, B)
- × 100 Tourists (A, C)  
<https://forms.gle/GbEwzw3Bgs66DFJc8>

## Environment

- × Exhibition
- × Non topic-related



# Actions



## Supervised analysis

- × Analyzing the collected data to find lack on the expertise level accuracy
- × Check the best description length that satisfies the “average users”
- × Improve the response delay or quality of fluency

## Telemetries

- × Adjust hyperparameters user by user
- × Adjust the description length
- × Randomly provide different combinations of hyperparameters
- × Analyze the most popular user’s tastes and languages for a better support



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“ [Mysterious] is the fundamental emotion that stands at the cradle of true art and true science. ”

—ALBERT EINSTEIN, *The World As I See It*