IdP Project Proposal – Winter Semester 2023-2024

Traveling images:
Deep learning for exceptional architecture

Background

Image matters for cities. Architectural icons contribute to the image of cities. In the context of a growing mass circulation of photographs on the internet, cities and urban players count on such circulation and viral effects for projecting a certain image of a city or an institution. However, **how can we describe the quality, quantity, speed, and scope of the circulation of digital photographs of a certain building on a social media platform? Do certain images of buildings have particular intrinsic characteristics that make these images more likely to go viral?**
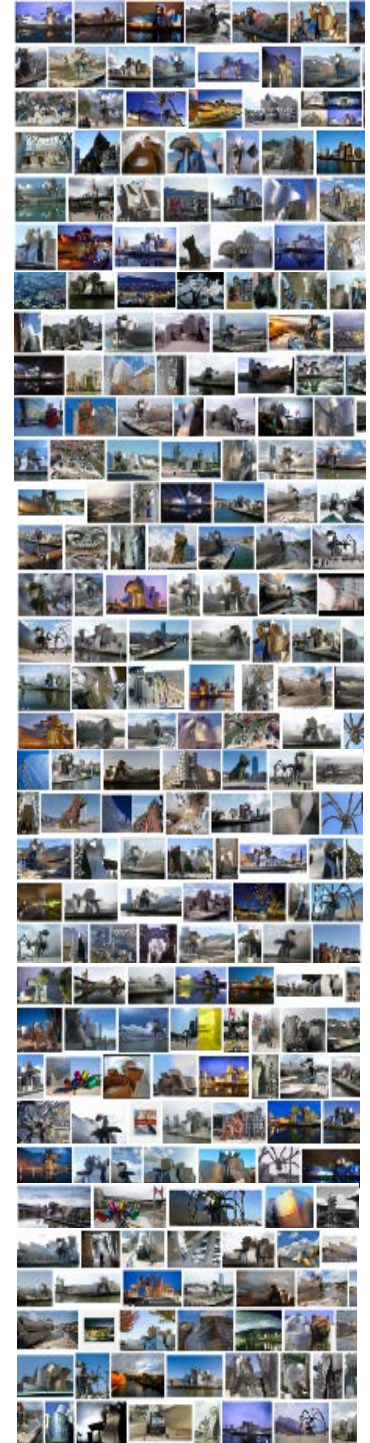
Task and Potential Outcomes

The proposed project seeks to develop and assess automated methods for quantifying and analyzing the circulation of digital photographs on a social media platform of selected iconic buildings.

The previous studies, also carried out as IdP's, included the Elbphilharmonie in Hamburg and the Depot Boijmans in Rotterdam and the photo-sharing social media platforms Flickr and Instagram respectively. Images of the buildings were scraped using the hashtag and geo-location. The studies enabled topic modeling and spatial analysis, image clustering, and analysis of interactions identifying actor groups and their narratives from before and after the opening of the buildings i.e. development over time. Our most recent IdP used manifold learning of images of buildings designed by Pritzker Prize Laureates. The objective was to find out whether using an automated method could help us identify a shift in the trajectory of the prize.

The project is **exploratory in nature**, and ideas from informatics students are highly appreciated in the process. In the context of a case study, you will address some of the following:

- Explore potential social media platforms and select one that can be scraped to analyze the circulation of images and narratives
- Trace how images travel within social media communities through sharing/re-posting
- Analyze to which extent users are appropriating star architecture buildings or creating memes about them through the analysis of images
- Analyze the content of images through image labels and object recognition
- Create a 3D mapping to assess from where people are taking pictures of star architecture buildings
- Explore, adapt and or develop tools for sentiment analysis of photographs themselves
- Use natural language processing and sentiment analysis of post captions and emojis to determine whether and how narratives are being communicated and received
- Using data as well as the knowledge generated during this and past IdPs, explore how a metric for the iconicity of star architecture buildings could be formulated

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Images on first page in Google on "Guggenheim museum Bilbao"