

Touristic site attractiveness seen through Twitter

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Tourism is becoming a significant contributor to medium and long range travels in an increasingly globalized world. Leisure traveling has an important impact on the local and global economy as well as on the environment. The study of touristic trips is thus raising a considerable interest. In this work, we apply a method to assess the attractiveness of 20 of the most popular touristic sites worldwide using geolocated tweets as a proxy for human mobility. In order to measure the site attractiveness, we need to identify the place of residence of every user who have been at least once in one of the touristic sites.

We will rank the touristic sites based on the spatial distribution of the visitors' place of residence. Two metrics have been considered to measure the attractiveness of a touristic site. In the first place we calculate the average distance between the places of residence and the touristic site. This distances are computed using the Haversine formula between the latitude and longitude coordinates of the centroids of the cells of residence and the centroid of the touristic site. The other measure used is the area covered by the users' places of residence computed as the number of distinct cells (or countries) of residence. With this metrics we build a ranking to study the characteristics of the touristic sites. The Taj Mahal, the Pisa Tower and the Eiffel Tower appear consistently in the top 5 in these rankings. However, since the metrics are sensitive to slightly different information both rankings also display some dissimilarities. For example, the Grand Canyon and the Niagara Falls exhibit a high coverage due to a large number of visitors from many distinct places in the US but a low radius of attraction at the global scale.

We then pass to a coarser scale and classify the travelers by country of residence. By studying the touristic preferences of the residents of each country, two natural clusters emerge from the data. These clusters are without surprise composed of countries which tend to visit in a more significant way touristic sites located in countries belonging to their cluster. The first cluster gather countries of America and Asia whereas the second one is composed of countries from Europe and Oceania. Touristic site's visiting figures are then studied by country of residence showing that the Eiffel Tower, Times Square and the London Tower welcome the majority of the visitors of each country. Finally, we build a network linking sites whenever a user has been detected in more than one site. This allow us to unveil relations between touristic sites and find which ones are more tightly interconnected. The Eiffel Tower, Times Square, Zocalo and the London Tower appear to be the most central sites playing a key role in the global connectivity of the network.