

# "See Naples, then dye": Spatial Categorisation of Tourist Attractions with Reviews' Sentiment Scores

Luigi Celardo<sup>1</sup>, Michelangelo Misuraca<sup>2</sup>, Maria Spano<sup>3</sup>

<sup>1</sup>DiSS, University of Naples Federico II - luigi.celardo@unina.it

<sup>2</sup>DiScAG, University of Calabria - michelangelo.misuraca@unical.it

<sup>3</sup>DiSES, University of Naples Federico II - maria.spano@unina.it

## Abstract

User-generated content (UGC) growth in the travel industry makes reputation a significant part of travellers' daily activities. Digital platforms hosting reviews of attractions and other tourist points of interest, such as TripAdvisor, have become increasingly important for the managerial structure of the travel industry. Furthermore, the reputation associated with tourism services is increasingly linked to material goods, atmosphere and the search for historical centres, which have become the main destinations of postmodern tourists. Textual reviews of points of interest can be processed and used in statistical analysis to gain valuable insights. Here, we propose calculating the polarity scores of reviews for all tourist attractions in Naples and using them in combination with other characteristics (e.g., duration of visit and type of site) to construct spatial clusters of tourist attractions. The geo-referenced semantic orientation of the reviews on a given attraction represents a valuable quantitative feature for further analysis and the production of spatial statistics, thanks to the possibility of characterising each cluster. We use the geo-referenced polarity scores to assess quantitatively and spatially whether and how tourist sentiment towards a place changes and which are the main issues in the different geographical areas.

**Keywords:** opinion mining, geo-referenced POI, spatial cluster analysis.