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Title: Analysing land cover and green space consultation semantics: concepts, overlaps and mappings

Abstract

This paper examines the use of different approaches to text mining spatial data semantics under two circumstances: data integration and information mining. In the first analysis, semantics overlaps are used to understand how the concepts embedded in different land cover datasets relate to each other and to determine the nature and direction of the uncertainties involved in any integrating activity. Many areas of public life and policy making now involve some form of public consultation and in the second example, the objective is to analyse consultation data (free text) collected from members of the public in relation to green spaces. Latent Dirichlet Allocation (LDA) was used to analyse the latent semantic of different 'bags of words' generated through a series of public consultations. The method provides policy makers with 'objective' statistical analyses of such data. However some caution is needed in the application of LDA: different runs will produce subtly different results due to its sampling. However exploring the sensitivity of the data in order to minimise these uncertainties is shown to generate stable results.