Dynamic Population Mapping Using Social Media Data (Twitter)

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ABSTRACT: This study aims to evaluate social media data as a proxy of population distribution by comparing the number of Twitter messages or users to LandScan [1] (i.e. population estimation at 1km resolution of grid) and Census (i.e. population at census block level count) in San Diego County. To test validity of Twitter data for predicting the number of population, Ordinary Least Square (OLS) linear regression and Geographically Weighted Regression (GWR) was used to model, and the modeling results were compared each other. The result shows that GWR works much better for predicting the population using Twitter data than OLS. In addition, the result of goodness of model fit of GWR shows that LandScan is better approximated by GWR than Census.

KEYWORDS: Twitter, Social media, Population, Dynamic mapping

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