Spatially Random Sampling for Retail Food Risk Factors Study

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Abstract : In 2013 and 2014, the U.S. Food and Drug Administration (FDA) collected data from selected fast food restaurants and full service restaurants for tracking changes in the occurrence of foodborne illness risk factors. This paper discussed how we customized spatial random sampling method by considering financial position and availability of FDA resources, and how we enriched restaurants data with location. Location information of restaurants provides opportunity for quantitatively determining random sampling within non-government units (e.g.: 240 kilometers around each data-collector). Spatial analysis also could optimize data-collectors' work plans and resource allocation. Spatial analytic and processing platform helped us handling the spatial random sampling challenges. Our method fits in FDA's ability to pinpoint features of foodservice establishments, and reduced both time and expense on data collection.

Keywords : geospatial technology, restaurant, retail food risk factor study, spatially random sampling **Conference Title :** ICSSG 2016 : International Conference on Spatial Statistics and Geostatistics **Conference Location :** New York, United States

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