Call for Papers

Special Issue on Geo-social Media Analytics

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Open source and community driven data have and continue to pervade many facets of our society. Advancements in communication infrastructures and low access barriers to communication sinks (e.g., personal mobile devices) have dramatically increased the size and reach of open source data such as those observed in social media: Twitter feeds, user blogs, Flikr images, and others. In several cases, the data have been implicitly or explicitly encoded with spatial and temporal attributes manifested in a variety of forms such as place names in Tweets and spatial coordinates in Flikr. Exploiting the open source data in conjunction with their spatiotemporal contexts can enhance our understanding of the physical environment, societal condition, and the complex dynamics and relationships between them. For example, in the context of disaster response, Twitter feeds and Flikr imageries can provide a rich and valuable avenue for monitoring the spatial distribution of affected areas and population sentiments to positively impact relief efforts such as the one caused by Hurricane Sandy. During Arab Spring, the geographic evolution of population attitudes as observed in various social mediums can serve as effective indicators to demonstrations, protests, and general societal unrests in the Arab World. However, there are several challenges that hinder effective exploitation of these data, which include: highly skewed data availability and distributions, continuously evolving nature of the data, implicit and ambiguous spatiotemporal attributions, and acutely noisy data. New research is required to address these critical challenges and advance our knowledge to effectively bridge the gap between geospatial and open source intelligence.

The purpose of this special issue is to seek high quality research papers that contribute to the advancement of knowledge in geospatial and open source data management and analytics. Researchers and practitioners are invited to submit original research and application papers addressing topics including but not limited to the following:

- Spatial mining for geo-enabled social networks
- Prediction methods for estimating physical environment, terrain parameters, and societal components from multimodal and geo-enabled open source data
- Geolocation inference from uncertain social media data
- Computational models for analyzing and processing heterogeneous data at multiple spatiotemporal scales
- Population mobility characterization techniques for geo-enabled social media data
- Data fusion techniques for structured and unstructured geo-spatial encoded social media data
- Disease outbreak and spread modeling and detection methods from open source data
- Crowdsourcing in geographic information systems
- Novel applications targeted to public health, safety, and sustainability

All papers will undergo the same rigorous GEIN review process. Please refer to the GEIN website for detailed instructions on paper submission. Please choose “Special Issue: Geo-social Media Analytics” as the Article Type.