Measuring the distance of moving objects from big trajectory data

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Location-based services have become important in social networking, mobile applications, advertising, traffic monitoring, and many other domains. The growth of location sensing devices has led to the vast generation of dynamic spatial-temporal data in the form of moving object trajectories which can be characterized as big trajectory data. Big trajectory data enables the opportunities such as analyzing the groups of moving objects. To obtain such facilities, the issue of this work is to find a distance measurement method that respects the geographic distance and the semantic similarity for each trajectories. Measurement of similarity between moving objects is a difficult task because not only their position changes but also their semantic features vary. In this research, a method to measure trajectory similarity based on both geographical features and semantic features of motion is proposed. Finally, the proposed methods are practically evaluated by using real trajectory dataset.