Moving Objects Clustering from Big Trajectory Data

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The mobile communication technologies penetrate our society and wireless network to detect the movement of people to generate large amount of data mobility including mobile phone call records and Global Positioning System (GPS) traces which can be characterized as big trajectory data. The remarkable analytical strength of the massive data collection trajectory can help to show the complexity of human mobility. The knowledge discovery process is addressed on some of the fundamental issues of mobility analysts such as the ways people move. In this work, the problem of determining the number of groups and the members of the trajectory nodes within the group from big trajectory data are considered. A framework for clustering moving objects from big trajectory data is designed. Additionally, a distance based clustering algorithm to specify the number of groups and their identity are proposed. Finally, the proposed methods are practically evaluated using real Geolife dataset.