Trajectory Grouping Structure Summary

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Given a set of moving entities we wish to determine when and which subsets of entities travel together. When a sufficiently large set of entities travels together for a sufficiently long time, we call such a set a group . We wish to capture this group change information in a model that we call the trajectory grouping structure. The informal definition above suggests that three parameters are needed to define groups: (i) a spatial parameter for the distance between entities; (ii) a temporal parameter for the duration of a group; (iii) a count for the number of entities in a group. Reeb graphs to capture the grouping structure. The grouping structure can help us in answering various questions. For example: What is the largest/longest maximal group at time t? How many entities are currently (not) in any maximal group? What is the first maximal group that starts/ends after time t? What is the total time that an entity was part of any maximal group? Which entity has shared maximal groups with the most other entities? In our paper we group the trajectories on a time frame basis. Using this approach we can group the trajectories over a period of time. In their paper if an entity x leaves a group G and almost immediately returns, they would like to ignore the small interval on which x and G were separate. Also we will be able to make our flow graph from this by first computing the group structure. We have to consider each user trajectory and the compute the group structure.