



Título: On computing temporal functions for a time-dependent networks using Trajectory Data Streams

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Resumo:

The usage of moving object trajectories for computing travel times is of key importance for building accurate time dependent networks. In this context, we propose a new temporal function for a time dependent network using Trajectory Data Streams. This proposal extends the previous Piecewise prediction model, which uses a suavization curve approach, called LOESS, that can estimate where the breakpoints values occurs in a Piecewise linear function. A challenge faced by the use of trajectory data streams is related with limited time to update time dependent network time functions. Our model computes the time dependent network and update the temporal function that needs to reflect the latest data and discard the obsolete data. The discontinuity of the temporal function can cause a subsequent computing and may degrades the performance of the algorithm. Therefore, we propose a new structure to compute the update of temporal function and reflect the real data distribution, given the change in time. We described our solution and present experimental results, which show that our approach is efficient and effective.

Banca:

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