A GPU approach to subtrajectory clustering using the Fréchet distance.

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Given a trajectory $T$ we study the problem of reporting all subtrajectory clusters of $T$. To measure similarity between curves we choose the Fréchet distance. We show how the existing sequential algorithm can be modified exploiting parallel algorithms together with the GPU computational power showing substantial speed-ups. This is to the best of our knowledge not only the first GPU implementation of a subtrajectory clustering algorithm but also the first implementation using the continuous Fréchet distance, instead of the discrete Fréchet distance.

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