

Mining City-Wide Encounters in Real-Time

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Summary

Advancements in **data mining** coupled with the ubiquity of **mobile devices** has led to the possibility of **mining** for **events** in **real-time**. A naive solution is to use a **nearest neighbor (NN) search** to return potential **encounters**, this results in slow query response times. We introduce a new algorithm that is **efficient** in capturing **encounters** by exploiting the **observation** that just the neighbors in a **defined proximity** needs to be **maintained**. Our evaluation demonstrates that our method **mines** for **encounters** for **millions** of individuals.



- Maintaining only cells of people in proximity that have been in proximity for a given amount of time can be used to define a new data structure. We call this TimeGrid.
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