Searching Trajectories by Regions of Interest

Abstract:

The availability of GPS-equipped devices (e.g., vehicle navigation systems and smart phones) and online map-based services (e.g., Google Maps1, Bing Maps2, and MapQuest3) enable people to capture their current location and to share their trajectories by means of services such as Bikely4, GPS-Way-points5, Share-My-Routes6, and Microsoft GeoLife7. Also, more and more social networking sites, including Twitter8, Four square9, and Facebook10, support the sharing of trajectories. The availability of massive trajectory data enables novel mobile applications. Such applications may utilize trajectory search, which finds trajectories that are similar in some specific sense to query parameters (a set or sequence of locations or regions).

Existing System:

In most existing studies on trajectory search the query parameters are a set or sequence of locations. However, in some cases, a place may not be a point location, but may be a region of interest that contains several spatial objects (e.g., a scenic area, a commercial district, or a dining area, where spatial objects can be points of interest (POIs), geo tagged photos, or geo-tagged tweets). Moreover, especially when planning a trip in an unfamiliar city, users may fail to specify intended locations exactly and may use intended regions instead. These two common cases motivate our study.

Disadvantages:

- Performance is poor.

Proposed System:

We propose and study a novel problem, namely trajectory search by regions of interest (TSR query), that finds the trajectory with the highest spatial-density correlation to a sequence of query regions. Compared to existing studies of trajectory search by locations, we take the

concept of query region and the density of spatial objects into account. This type of query is useful in many popular applications such as trip planning and recommendation, and location based services in general. To compute the TSR query efficiently, we develop a best-expansion search algorithm that exploits upper and lower bounds to prune the search space and adopts a query source selection strategy, as well as a heuristic search strategy based on priority ranking to schedule multiple query sources. The performance of the TSR query was investigated through extensive experiments on both real and synthetic spatial data.

Advantages:

- Performance is high.

Modules:

- Baseline Method.
- TSR Query Processing.

SYSTEM REQUIREMENTS

H/W System Configuration:-

- Processor - Pentium –III
- RAM - 256 MB (min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse
- Monitor - SVGA

S/W System Configuration:-

- Operating System : Windows95/98/2000/XP
- Application Server : Tomcat5.0/6.X

- Front End : HTML, Jsp
- Scripts : JavaScript.
- Server side Script : Java Server Pages.
- Database : MySQL 5.0
- Database Connectivity : JDBC