

**Fine-Grained Locations in User Comments**

**Abstract:**

Many domain-specific websites host a profile page for each entity (e.g., locations on Foursquare, movies on IMDb, and products on Amazon) for users to post comments on. When commenting on an entity, users often mention other entities for reference or comparison. Compared with web pages and tweets, the problem of disambiguating the mentioned entities in user comments has not received much attention. This paper investigates linking fine-grained locations in Foursquare comments. We demonstrate that the focal location, i.e., the location that a comment is posted on, provides rich contexts for the linking task. To exploit such information, we represent the Foursquare data in a graph, which includes locations, comments, and their relations. A probabilistic model named FocalLink is proposed to estimate the probability that a user mentions a location when commenting on a focal location, by following different kinds of relations. Experimental results show that FocalLink is consistently superior under different collective linking settings.