

Yelp Trend Propagation, Gelling in large graph

PROPOSAL

The number of online consumers who read and trust reviews are increasing day by day. Forbes reported that 88 percent of consumers trust online reviews as much as personal recommendation. Peers utilize the user experience and opinions to make decisions about where to go and what to buy. One of the major giants in recommending restaurants is Yelp. Many restaurants that made the list of top places to eat in 2017 are established only a year or two ago. A food or a restaurant, when newly introduced can suddenly become a sensation based on user reviews. In such cases, we want to maximize the spread of potential piece of information. This can be made by adding a given number of edges among the potential nodes. In a graph, the users are the nodes and the edges are the connections between users. We can maximize the spread by recommending the information to the most influential node(user) in a graph, subjected to the locality. We introduce Machine Learning Algorithms to find out the potential and influential node(user) based on the several parameters (number of followers, user's previous likings, previous influence). We identify who the trend setters are and how the user's choices and ratings influence their social circle. This information is stored as a user's feature. The model ensures increased dissemination of information when compared to existing methodologies. Additionally, this model would help predict the future trends on foods based on the learning from the current dataset.

We present the following objectives of our project proposal,

- We classify a user's review about recently opened restaurants into several topics
- We propose Algorithms to find the most influential nodes(user) who are interested in the same topics away from the friend's list.
- In a large-scale graph, we plan to achieve increased information dissemination by introducing an edge to the K influential user.
- We conduct experiments evaluations on real users and show that our method will be effective and scalable.

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Reference:

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