Title: Extending Self-organizing Maps with Ranking Awareness

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Abstract: The self-organizing map (SOM) is a powerful clustering algorithm which takes high-dimensional data as the input and produces a low-dimensional representation of the data. The SOM provides useful insights into the given data by recognizing similar input vectors and clustering them. However, they take into account only the local similarity of the input data, as opposed to relevance (any external ranking). In this paper, we propose two ranking-aware variants of the SOM in an effort to tackle this issue and incorporate evaluation metrics to evaluate our results.

Keywords: self-organizing map, relevence feedback, known-item search