A convolutional neural network-based reviews classification method for explainable recommendations

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Abstract:
Recent advances in information filtering have resulted in effective recommender systems that are able to provide online personalized recommendations to millions of users from all over the world. However, most of these systems ignore the explanation purpose while producing recommendations with high-quality results. Moreover, the classification of reviews given to users as explanations is not fully exploited in previous studies. In this paper, we develop a convolutional neural network-based reviews classification method for explainable recommendation systems. The convolutional neural network is used to extract the reviews features for predicting whether the reviews provided as explanations are positive or negative. Based on such additional information, users can understand not only why certain items are recommended for them but also get support to know the nature of such explanations. We conduct experiments on a dataset from Amazon. The experimental results show that our method outperforms state-of-the-art methods.

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