

Personalized News Recommendation using Classified Keywords to Capture User Preference

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Abstract— Recommender systems are becoming an essential part of smart services. When building a news recommender system, we should consider special features different from other recommender systems. Hot news topics are changing every moment, thus it is important to recommend right news at the right time. This paper aims to propose a new model, based on deep neural network, to analyze user preference for news recommender system. The model extracts interest keywords to characterize the user preference from the set of news articles read by that particular user in the past. The model utilizes characterizing features for news recommendation, and applies those to the keyword classification for user preference. For the keyword classification, we use deep neural network for online preference analysis, because adaptive learning is necessary to track changes of hot topics sensitively. The usefulness of our model is validated through experiments. In addition, the accuracy and diversity of the recommendation results is also analyzed.

Keyword— Preference mining, keyword classification, deep belief network, user profile, news recommendation



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