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Scientific Recommender Systems Based on Neural Topic Model

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Abstract : With the rapid growth of scientific literature, it is becoming increasingly challenging for researchers to keep up with the latest findings in their fields. Academic, professional networks play an essential role in connecting researchers and disseminating knowledge. To improve the user experience within these networks, we need effective article recommendation systems that provide personalized content.Current recommendation systems often rely on collaborative filtering or content-based techniques. However, these methods have limitations, such as the cold start problem and difficulty in capturing semantic relationships between articles. To overcome these challenges, we propose a new approach that combines BERTopic (Bidirectional Encoder Representations from Transformers), a state-of-the-art topic modeling technique, with community detection algorithms in a academic, professional network. Experiences confirm our performance expectations by showing good relevance and objectivity in the results.

Keywords : scientific articles, community detection, academic social network, recommender systems, neural topic model
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