

## **Svd-lda: Topic modeling for full-text recommender systems**

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### **Abstract**

© Springer International Publishing Switzerland 2015. In recommender systems, matrix decompositions, in particular singular value decomposition (SVD), represent users and items as vectors of features and allow for additional terms in the decomposition to account for other available information. In text mining, topic modeling, in particular latent Dirichlet allocation (LDA), are designed to extract topical content of a large corpus of documents. In this work, we present a unified SVD-LDA model that aims to improve SVD-based recommendations for items with textual content with topic modeling of this content. We develop a training algorithm for SVD-LDA based on a first order approximation to Gibbs sampling and show significant improvements in recommendation quality.

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