Abstract

The last decade has seen rapid strides being taken in the field of recommender systems, which has been driven by both consumer demand for personalization as well as academic interest in implementing more accurate and optimized versions of recommender systems. In this paper we have discussed our implementation of Quaestus, a top-n item-based collaborative filtering recommender system with ranked matrix factorization (for relevance based sorting) which we have tested on an e-commerce dataset. We have used sentiment analysis to understand the polarity of reviews and thus extracting a score out of it, which in collaboration with the product rating (which was available on a scale of 1 to 5) has helped build a more robust recommender system. We have deployed Quaestus on an e-commerce website that we have built. The paper describes the phases of implementation and shows the method to deploy our model to the website that we have created. The results after experiments have shown that our model fares better than other algorithms with which we have compared our model.


**Index Terms**

Computer Science  
Information Systems

**Keywords**

Recommender System, Matrix Factorization, Sentiment Analysis, Bigram Extraction, K-fold Cross-validation, Ranking Based Factorization.