

The bachelor thesis deals with the topic of recommender systems, which are especially important in e-commerce field. The main goal of the thesis was to implement a recommender system that would cover the needs of recommending in the book domain (on an e-shop dealing with book sales). The focus of the work is the implemented recommender system that handles the data available for the book domain, however, it is designed more generally to be deployable as Recommendation-as-a-Service. The system includes both the recommendation algorithms themselves (collaborative, content-based and hybrid), as well as support for the different phases of the recommendation lifecycle, recommendation performance monitoring and easy administration through an interactive web interface.

We then evaluated the recommendation algorithms, with experiments showing that collaborative methods, in particular ALS matrix factorization and ELSA, perform better with respect to relevance metrics. However, hybrid approaches and content-based methods may have advantages with respect to beyond accuracy metrics, especially Coverage and Novelty.