

Applying recommender algorithms for the RecSys Challenge 2015

BSc. thesis outline

Zsófia Klára Nyikes

Recommender systems have applications in a wide range in modern ages. People spend a huge amount of their time surfing on the internet, while they view or purchase items in webshops, listen to music or watch videos. Based on this kind of activity one can predict the users' future preferences, and recommend them items to buy, artists to listen to, movies to watch.

Yoochoose GmbH is a German company which offers Yoochoose Personalization Service to online retailers, publishers and media websites in order to make relevant, personalized recommendation to improve their business. RecSys Challenge 2015 is an international competition for teams or individuals interested in recommender systems. Yoochoose provided the participants a large amount of data about click and buy events from a big e-commerce website in Europe. The task of the competition is twofold. The first goal is to predict whether a session ends with a buy event or not. The second is to predict what items will be bought by the user.

In this thesis we introduce recommender systems and describe the basic methods to make recommendations. Using some of these methods we built a recommender system for the competition RecSys Challenge 2015. To this end we first measured several statistics on the given data. We used the information in the important statistics to generate features. These features were used to build a classification model. We also built an item to item matrix for matrix factorization. We used these two models together in our recommender system. We also tried to optimize the important parameters of the models.