Towards Diverse Recommendation

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ABSTRACT

In recent years great strides have been made in improving the accuracy of recommender systems from the point-of-view of their ability to predict users' ratings for unrated content given a database of past ratings. In a context where the system should ultimately recommend a list of items to the end-user, such accurate rating predictions can be seen as just one possible input into the decision system that selects the recommended content. It has been recognized for several years now that other qualities of the recommended list are also important in this selection process; it is not simply a matter of recommending those items with highest predicted ratings. In particular, a good system should offer a diverse choice of relevant items, allowing users to select from across their broad range of tastes. It is worth emphasizing that diversifying the recommendation is not simply a matter of selecting a set of highly dissimilar items for recommendation, since relevance is still a primary concern – increasing diversity while maintaining system performance, as measured by a relevance metric is a significant challenge. Research in diverse recommendation is still in an early stage; while a number of algorithms and systems for diverse recommendation have been proposed, many different performance measures and evaluation methodologies are being used making it difficult to compare across different approaches. In this talk, I attempt to summarize the state-of-the-art in diverse recommendation, bringing together the different approaches that have been proposed in recent years and the various performance measures that have been used. The goal is to set the context and to propose some ideas to generate what should be some interesting and controversial discussions during the remainder of the workshop.