Paper Summaries

Entity Query Feature Expansion using Knowledge Base Links

https://dl.acm.org/doi/pdf/10.1145/2600428.2609628

Authors present a new technique, Entity Query Feature Expansion (EQFE) to enrich the query with features from entities and their links to knowledge bases, including structured attributes and text. Experiments have been done using both explicit query entity annotations and latent entities. Evaluation has been done on TREText collections automatically annotated with knowledge base entity links, including the Google Freebase Annotations(FACC1) data.

Relaxed Online SVMs for Spam Filtering

http://www.eecs.tufts.edu/~dsculley/papers/emailAndWebSpamSIGIR.pdf

The paper shows that online SVMs give state-of-the-art classification performance on online spam filtering on large benchmark data sets like email spam, blog spam, and splog. It also shows that equivalent performance is achievable by Relaxed Online SVM at greatly reduced computational cost. ROSVM reduces computation cost by: Reducing the optimization problem size by only optimizing over the last p examples; Reducing the number of training updates by only training on actual errors; Reducing the number of iterations in the iterative SVM.

Attentive Group Recommendation

https://dl.acm.org/doi/pdf/10.1145/3209978.3209998

Authors contributed a novel solution, AGREE(Attentive Group REcommEndation), and addresses the preference aggregation problem by learning the aggregation strategy from data. It is based on the attention network and Neural Collaborative Filtering(NCF). Attention mechanism adapts the representation of a group, and learns the interaction between groups and items from data under the NCF framework. The modelling of user-item interactions is also integrated into the method and the two tasks of recommending items for both groups and users can be enforced. It also helps in the recommendation for users with no historical interactions. The neural attention network learns the weight of a member and assigns different weights for a user when the group interacts with different items. Thus the aggregation strategy for a group can be adjusted dynamically to capture the complicated process of group decision making.

Document Categorization in Legal Electronic Discovery: Computer Classification vs. Manual Review

The paper aims at determining if the automated systems could categorize documents comparable to how human reviewers could, thereby saving time and expense. The study in the paper compared an original categorization, obtained as part of a response to a Department of Justice Request and produced by having 225 attorneys review each document with automated categorization systems provided by two legal service providers. The results show that machine categorization is no less accurate at identifying relevant documents than employing reviewers and hence, machine categorization can be a substitute for human review.