Impact of Similarity Ratings on Human Judgement

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Abstract : Recommender systems are a common artificial intelligence (AI) application. For any given input, a search system will return a rank-ordered list of similar items. As users review returned items, they must decide when to halt the search and either revise search terms or conclude their requirement is novel with no similar items in the database. We present a statistically designed experiment that investigates the impact of similarity ratings on human judgement to conclude a search item is novel and halt the search. 450 participants were recruited from Amazon Mechanical Turk to render judgement across 12 decision tasks. We find the inclusion of ratings increases the human perception that items are novel. Percent similarity increases novelty discernment when compared with star-rated similarity or the absence of a rating. Ratings reduce the time to decide and improve decision confidence. This suggests the inclusion of similarity ratings can aid human decision-makers in knowledge search tasks.

Keywords : ratings, rankings, crowdsourcing, empirical studies, user studies, similarity measures, human-centered computing, novelty in information retrieval

Conference Title : ICSERSA 2023 : International Conference on Semantics-Enabled Recommender Systems and Applications

Conference Location : New York, United States

Conference Dates : April 24-25, 2023