

ABSTRACT (English)

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Compound Critiquing for Conversational Recommender System Based on Product Functional Requirements and Product Technical Features

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A conversational Recommender System (CRS) is a form of Recommender System to recommend a product through conversational dialogue. We have develop a CRS based on product functional requirements in previous research. This CRS has good interaction capabilities between the system and the user because it can accommodate users unfamiliar with technical features (novice users). However, when user needs are still general, the system will ask questions again to narrow down the user needs (query refinement). A good query refinement process is when one iteration of query refinement can significantly reduce the number of products that match the query. Thus, the interaction process can be more efficient. The problem with functional requirements-based CRS is that interaction based on functional requirements causes the query refinement process to be slower. Based on this problem, we combine query refinement based on functional requirements and technical features to speed up the query refinement process so that user-system interaction is expected to be more efficient. In this research, we use the FP-Growth algorithm to generate questions (technical features) using the compound critiquing method. The evaluation results show that the combination of technical features with functional requirements has a better query refinement than functional requirements-based CRS, so that it can increase user satisfaction with the characteristics of CRS. In addition, the use of the FP-Growth algorithm has a better running time (0.012 / seconds), compared to the Apriori algorithm (0.176 / seconds), and the ECLAT algorithm (0.766 / seconds).

Keywords: Conversational Recommender System, Critiquing, Technical features, Functional Requirements, FP-Growth