Abstract

The increasing availability of gadgets in the market makes it difficult for customers to find gadgets that suit their needs. Gadget recommender systems have been developed to help users find products according to their preferences. However, these systems often ask questions about technical specifications, thus confusing novice users. For this reason, a gadget recommender system is needed in which the question interaction uses functional requirements so that all users are able to understand it. Because most users are more familiar with and find it easier to express their needs through gadget functions, for example, a user needs a gadget for live streaming activities, playing HD quality games, online meetings, and programming but does not need editing activities. Therefore, we develop a conversational recommender system (CRS) that recommends gadgets based on functional requirements. The system mimics the interaction of a knowledgeable salesperson, guiding users toward products that suit their needs. Our proposed system uses ontology as a knowledge base to map functional requirements to product specifications. Through performance evaluation and user satisfaction, our system achieved a recommendation accuracy score of 84.04% and a user satisfaction score of 0.76. These results show that users are satisfied with the system's ability to recommend gadgets based on functionality requirements.

Keywords : gadget, conversational recommender system (CRS), ontology, functional requirement, knowledge-based recommender system.