ABSTRACT

A Reinforcement-based QA Recommender System for Responding to Community-based Suggestions using Enhanced Contextualization

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Community-based Question Answering (CBQA) platforms provide registered users a dedicated medium to interact with each other, find shared interest groups, post questions, crowdsource answers and learn from each other. In recent years, several CBQA platforms spanning verticals such as social news aggregation, business communication, retail, and social media platforms such as Pinterest, Instagram, and Facebook have gained traction.

These platforms provide users the ability to group and curate content. For example, Reddit, a social news aggregation platform, organizes its content into topic-based communities called subreddits. Users can join communities of interest by seeking help from other users on forums such as “r/FindAReddit”. However, with over 138,000 active communities, finding the right community to join is challenging.

Recent work in CBQA recommender systems has focused on finding previously answered similar questions or community topic experts to make the best answer recommendations. These approaches worked well for CBQA platforms when the number of questions was few. However, as the number of questions on these platforms grows, finding previously answered similar questions or community topic experts is not always possible.

In this project, we propose a Reinforcement-based Question-Answer Recommender (RQAR) system for responding to community-based network suggestions using enhanced

contextualization. Our approach groups community-related questions on the Reddit platform by topic, type, and semantic similarity, extracts contextual information from questions, and utilizes user interactions to these questions to find, rank, and recommend relevant communities to users.

***Index Items* — Social Networks, Natural Language Processing, Machine Learning, Question Answering System, Text Classification, Semantic Similarity, Recommendation Systems, Reinforcement based learning, Sense and Contextualized embeddings.**